MANAGING DROUGHT

IN THE SOUTHERN PLAINS

February 9, 2012

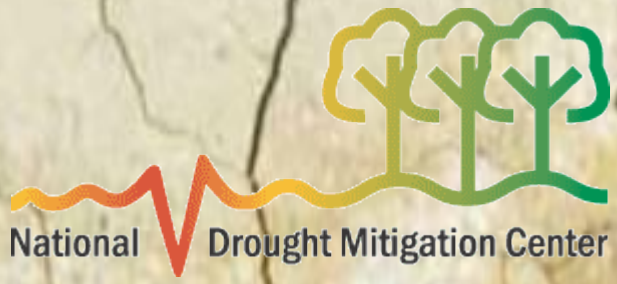
Webinar Format

- 2nd and 4th Thursdays of each month at 11:00 a.m. Central Time
  - 4th Thursday will be a drought status update & outlook only (no focus topic)
- Overview of regional drought conditions and outlook for next several weeks to months
  - led by the Drought Monitor authors
- Discussion Topic
  - Alternating between an impact type (wildfire, agriculture) and a resource (monitoring tools, assistance programs)
- Comments & Updates from State Climatologists
- Open-ended time for questions and comments
- Total Time Commitment: 45 minutes for presentations, as much time as needed for discussion
- Past webinars, summaries, and Federal/State Assistance links posted on the U.S. Drought Monitor, http://www.drought.gov in the Southern Plains Region. Webinars posted on Youtube: http://www.youtube.com/user/SCIPP01

Regional Drought Monitor Update

Brian Fuchs, Climatologist

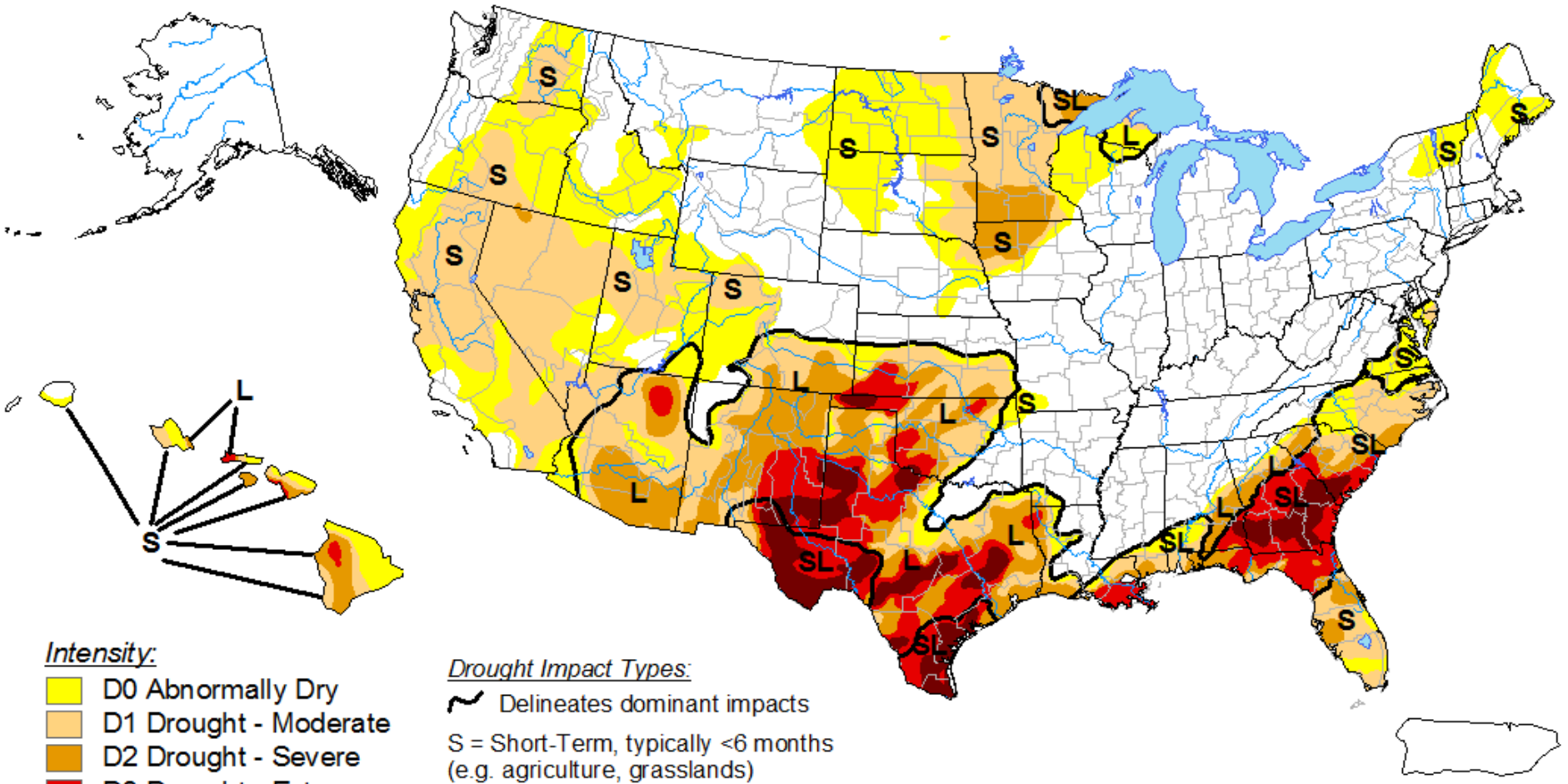
National Drought Mitigation Center
School of Natural Resources
University of Nebraska-Lincoln



SCIPP/NIDIS Drought Webinar Series, February 9, 2012

U.S. Drought Monitor

February 7, 2012
Valid 7 a.m. EST



Intensity:
- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

Drought Impact Types:

Delineates dominant impacts

S = Short-Term, typically <6 months (e.g. agriculture, grasslands)

L = Long-Term, typically >6 months (e.g. hydrology, ecology)

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

http://droughtmonitor.unl.edu/

USDA | National Drought Mitigation Center

Released Thursday, February 9, 2012

Author: Rich Tinker, NOAA/NWS/NCEP/CPC

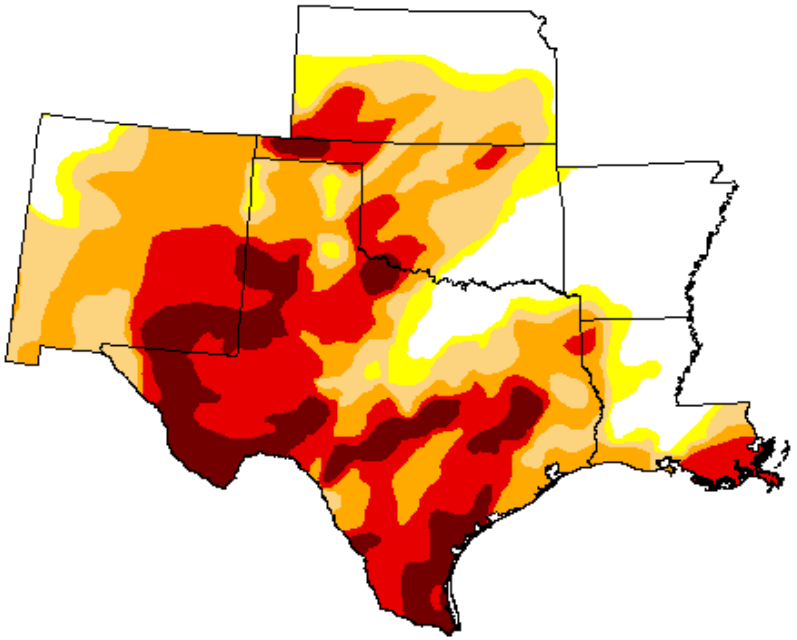
U.S. Drought Monitor

February 7, 2012
Valid 7 a.m. EST

South Central United States

Drought Conditions (Percent Area)

	None	D0 - D4	D1 - D4	D2 - D4	D3 - D4	D4
Current	21.93	78.07	70.74	53.65	31.94	11.58
Last Week (1/31/2012)	20.01	79.99	72.33	56.65	35.51	13.34
3 Months Ago (11/8/2011)	3.40	96.60	92.67	81.48	66.44	41.01
1 Year Ago (2/1/2011)	12.02	87.98	57.19	29.04	5.15	0.00



Intensity:

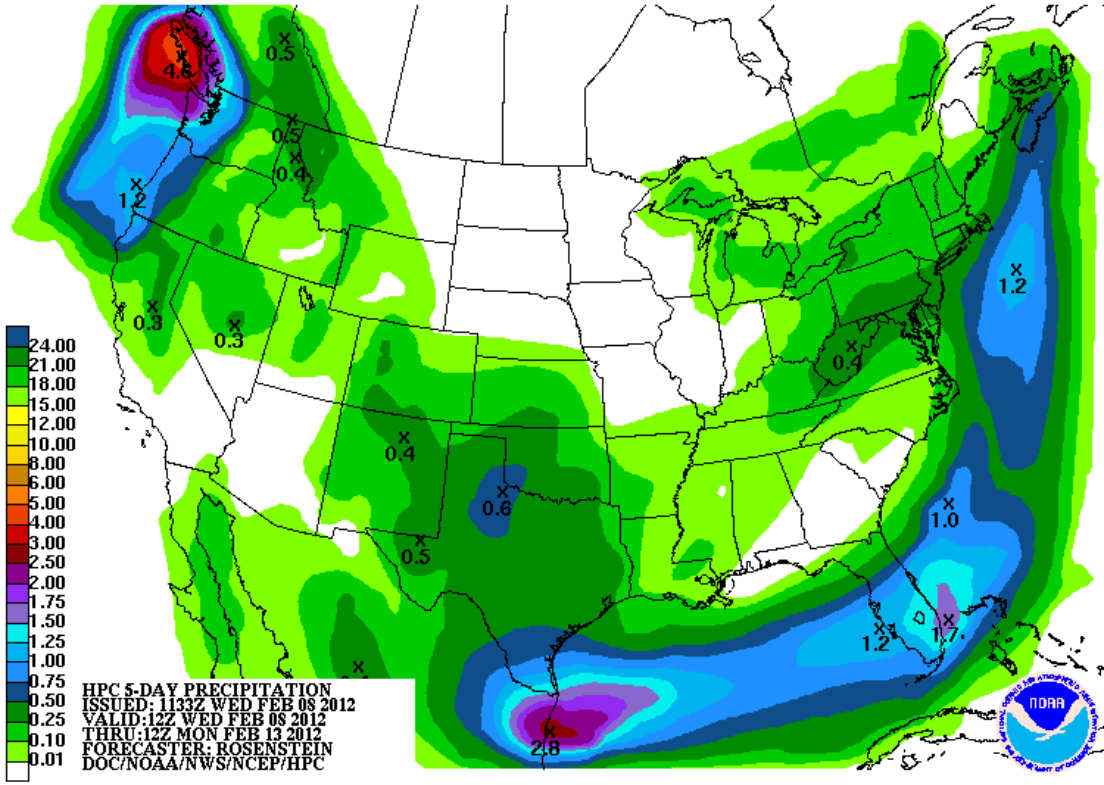
- D0 - Abnormally Dry
- D1 - Drought Moderate
- D2 - Drought Severe
- D3 - Drought Extreme
- D4 - Drought Exceptional

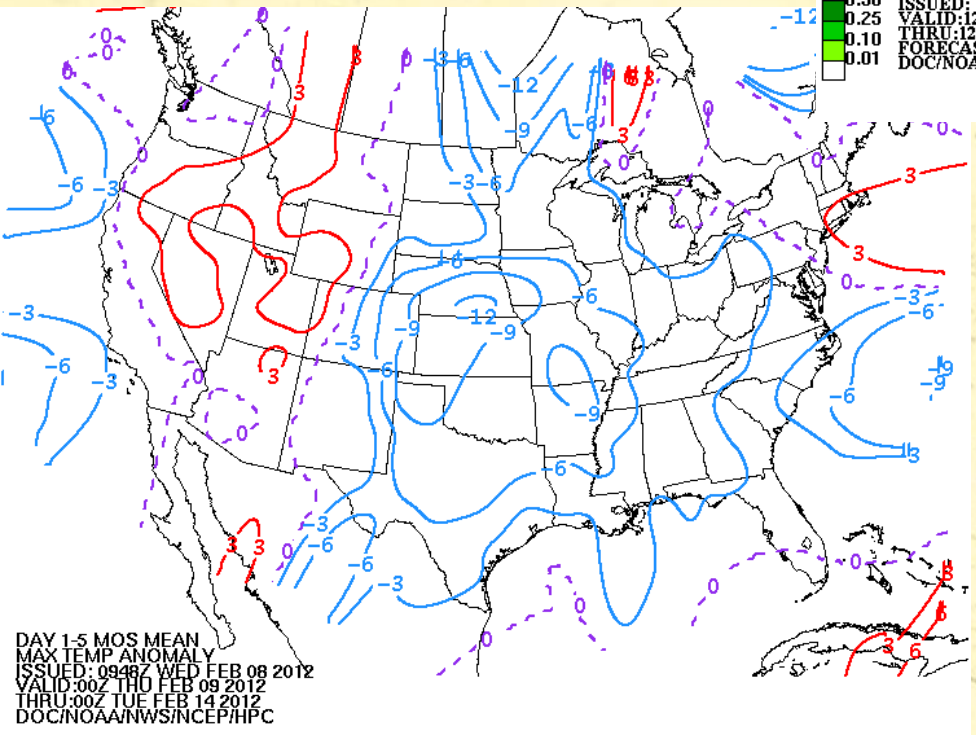
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forcast statements.

http://droughtmonitor.unl.edu

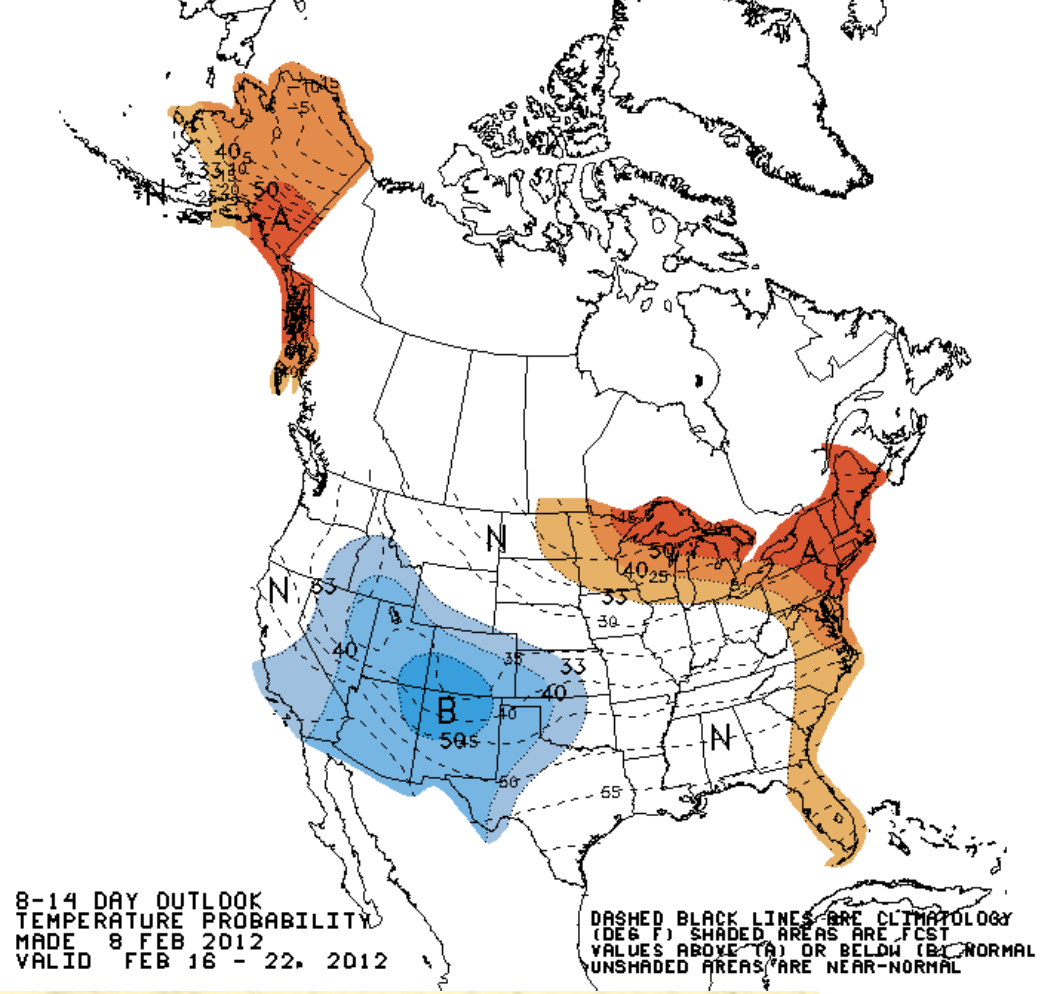
Released Thursday, February 9, 2012
Rich Tinker, Climate Prediction Center/NCEP/NWS/NOAA

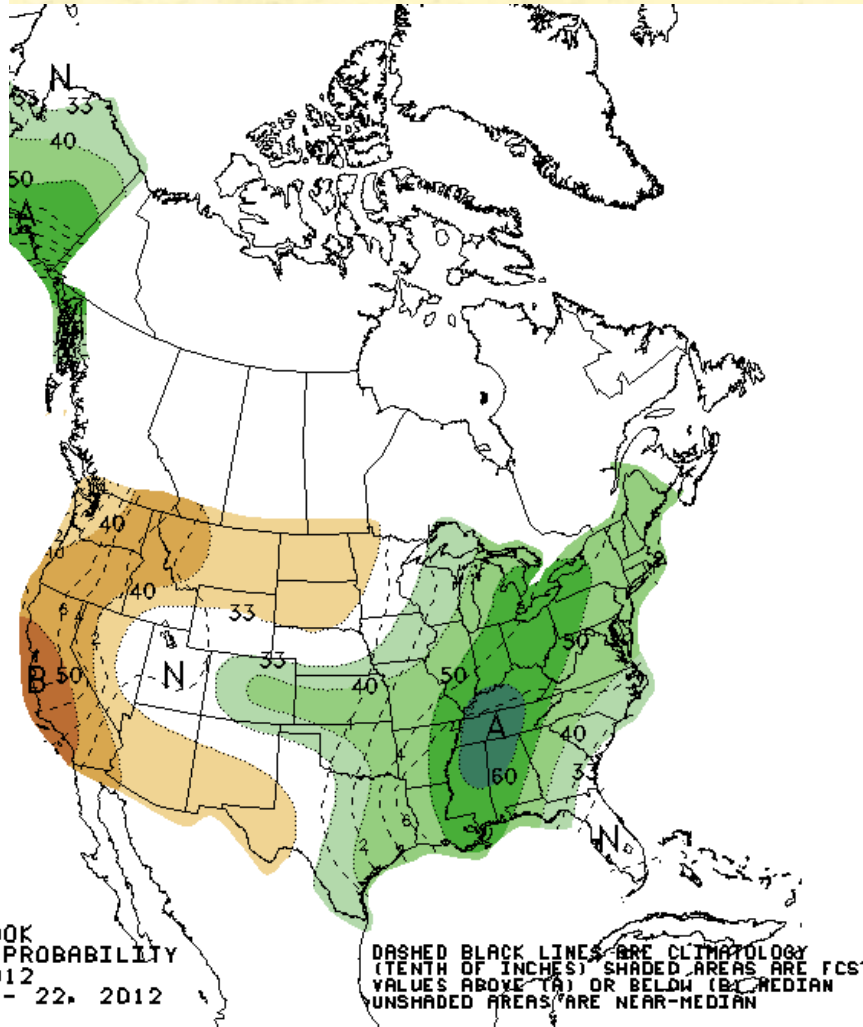
HPC 5-Day Outlook

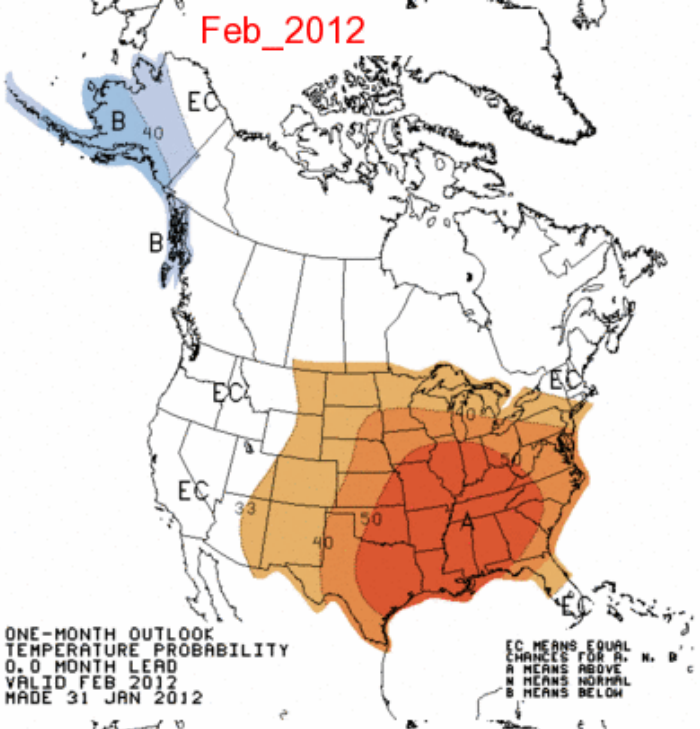


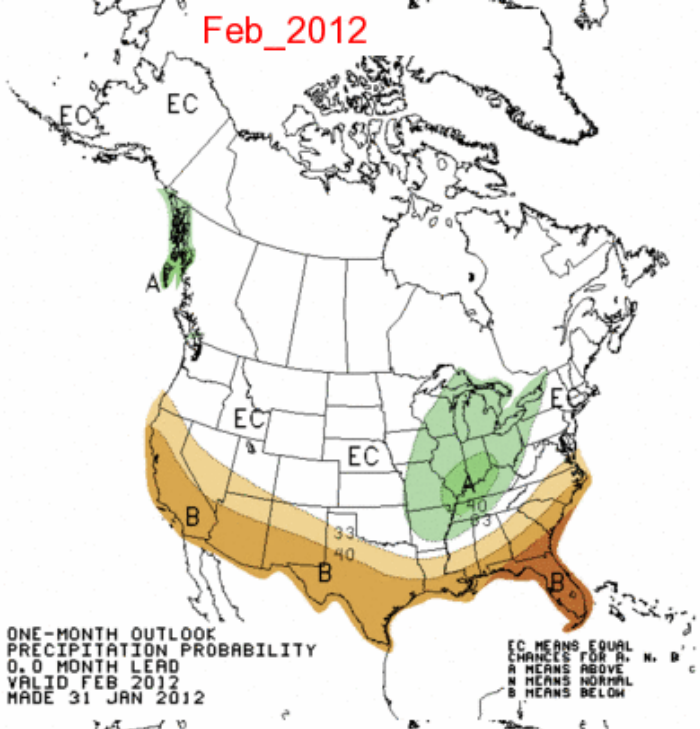


CPC 8-14-Day Outlooks






Feb_2012
ONE-MONTH OUTLOOK
TEMPERATURE PROBABILITY
0.0 MONTH LEAD
VALID FEB 2012
MADE 31 JAN 2012
EC MEANS EQUAL CHANCES FOR A, N, B
A MEANS ABOVE
N MEANS NORMAL
B MEANS BELOW


Feb_2012
ONE-MONTH OUTLOOK
PRECIPITATION PROBABILITY
0.0 MONTH LEAD
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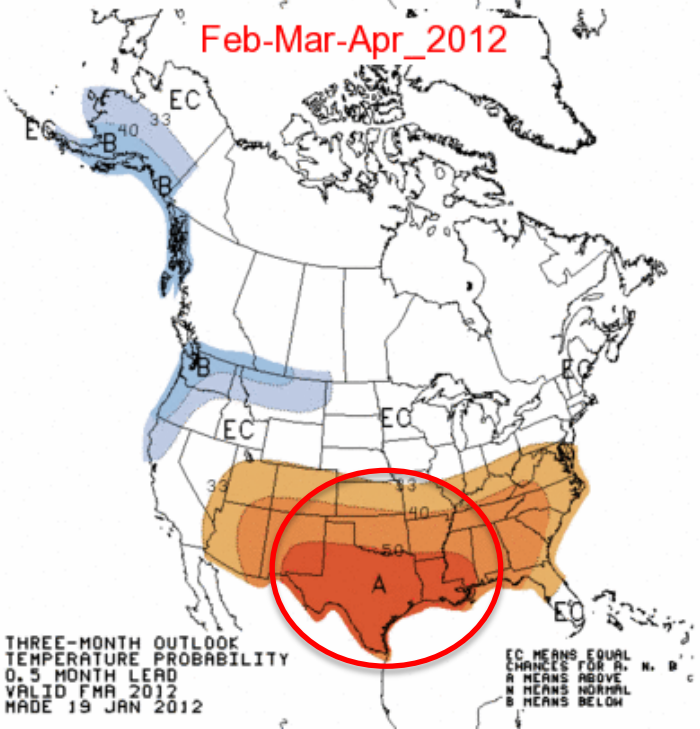
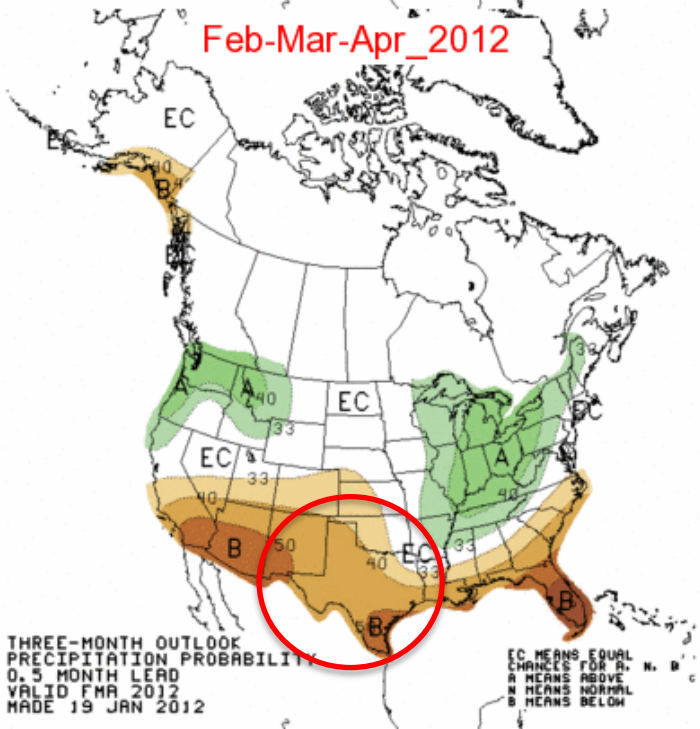
MADE 31 JAN 2012
EC MEANS EQUAL CHANCES FOR A, N, B
A MEANS ABOVE
N MEANS NORMAL
B MEANS BELOW


Feb-Mar-Apr_2012
THREE-MONTH OUTLOOK
TEMPERATURE PROBABILITY
0.5 MONTH LEAD
VALID FMA 2012
MADE 19 JAN 2012
EC MEANS EQUAL CHANCES FOR A, N, B
A MEANS ABOVE
N MEANS NORMAL
B MEANS BELOW


Feb-Mar-Apr_2012
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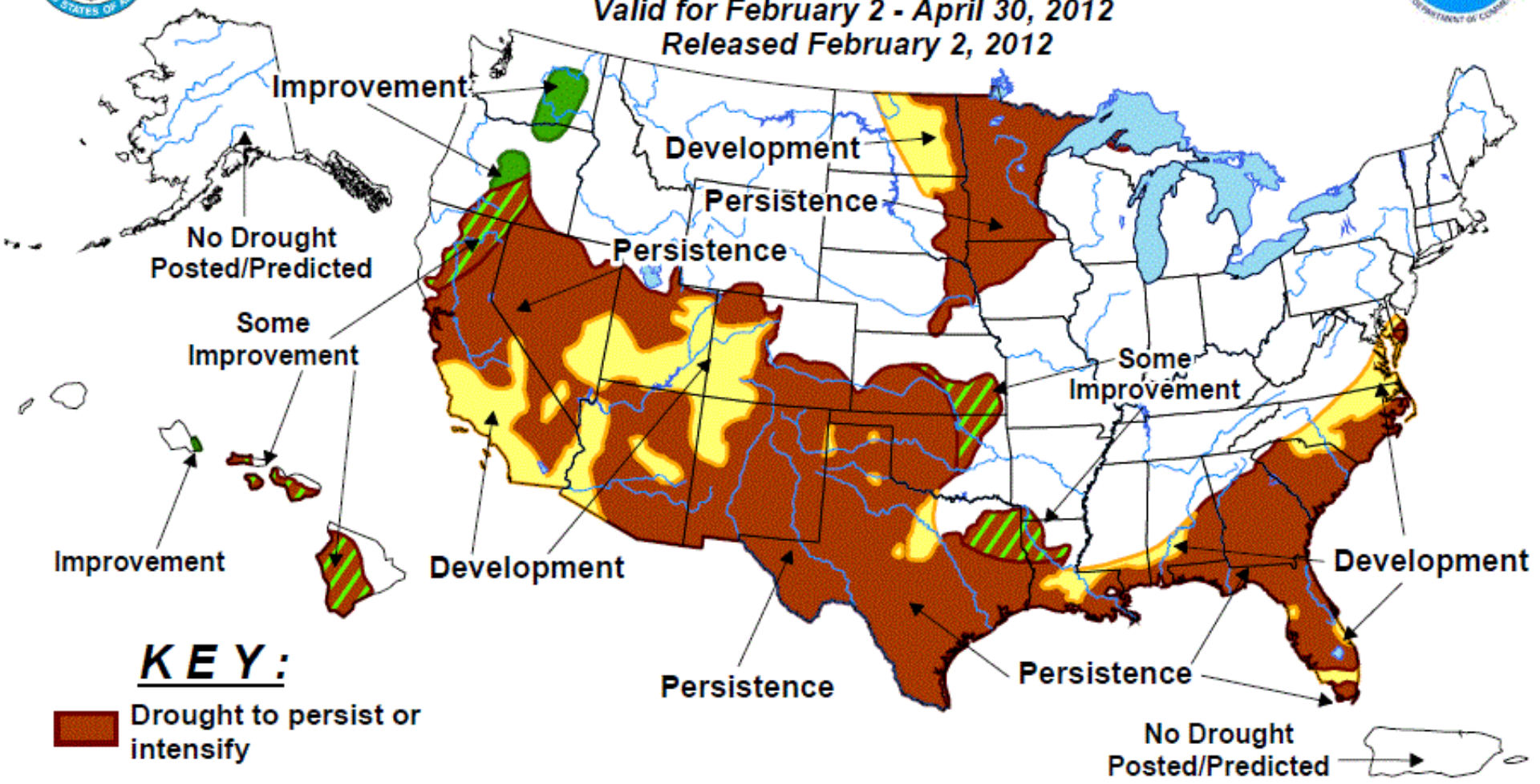
PRECIPITATION PROBABILITY
0.5 MONTH LEAD
VALID FMA 2012
MADE 19 JAN 2012
EC MEANS EQUAL CHANCES FOR A, N, B
A MEANS ABOVE
N MEANS NORMAL
B MEANS BELOW

U.S. Seasonal Drought Outlook

Drought Tendency During the Valid Period

Valid for February 2 - April 30, 2012

Released February 2, 2012



KEY:

- Drought to persist or intensify
- Drought ongoing, some improvement
- Drought likely to improve, impacts ease
- Drought development likely

Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Short-term events -- such as individual storms -- cannot be accurately forecast more than a few days in advance. Use caution for applications -- such as crops -- that can be affected by such events. "Ongoing" drought areas are approximated from the Drought Monitor (D1 to D4 intensity). For weekly drought updates, see the latest U.S. Drought Monitor. NOTE: the green improvement areas imply at least a 1-category improvement in the Drought Monitor intensity levels, but do not necessarily imply drought elimination.

Featured USDM Product

Did you know…..

There are several products available forecasting fire danger and potential?

INCIDENT INFORMATION
- Incident Management Situation Report
- National Fire News
- All Hazard Incidents

PREDICTIVE SERVICES
- Intelligence
- Weather
- Fuels/Fire Danger
- Outlooks
- National Predictive Services Subcommittee
- Links

LOGISTICS/DISPATCH
- Aviation
- Crews
- Equipment/Supplies
- Overhead
- Reference Materials

ADMINISTRATIVE
- National Multi-Agency Coordinating Group
- Policy and Reports
- Incident Business Management
- Safety Management
- Training

OUTLOOKS

NATIONAL SIGNIFICANT FIRE POTENTIAL OUTLOOKS

This product provides a monthly outlook and 3-month seasonal trend forecast of significant fire potential for the U.S. Outlook map images (jpgs) are embedded and linked in the document

National Wildland Significant Fire Potential Outlook (issued the first business day each month). Executive summary.

NATIONAL AND NORTH AMERICAN SEASONAL ASSESSMENT WORKSHOP REPORTS

Seasonal assessment workshops are held each year to develop comprehensive seasonal fire potential outlooks for the Eastern U.S., Western U.S. (including Alaska), and North America. Workshop attendees include intelligence specialists, meteorologists, climatologists, fire behavior analysts, fuels specialists, and representatives from Canada and Mexico.

The reports linked below are the result of this effort;

February 2012: National Seasonal Assessment Workshop Report - EAST: Eastern, Southern & Southwest Areas
May 2011: National Seasonal Assessment Workshop Report - WEST: Western States & Alaska
May 2011: North American Seasonal Assessment Map

Geographic Area Outlooks	Daily	7 Day Fire Potential	Multi-Media Briefings	Monthly	Seasonal
Each Geographic Area Predictive Services unit produces fire weather, fire danger, and fire potential reports. Products currently available from each Geographic Area are linked below.					
Alaska	Daily	7 Day Fire Potential	Briefing	Monthly	Seasonal
Eastern		7 Day Fire Potential	Briefing	Monthly	Seasonal
Eastern Great Basin	Daily	7 Day Fire Potential		Monthly	Seasonal
Northern California	Daily	7 Day Fire Potential		Monthly	Seasonal
Northern Rockies	Daily	7 Day Fire Potential	Briefing	Monthly	Seasonal
Northwest		7 Day Fire Potential		Monthly	Seasonal
Rocky Mountain	Day 1 Day 2	7 Day Fire Potential	Briefing	Monthly	Seasonal
Southern	Daily	7 Day Fire Potential	Briefing	Monthly	Seasonal
Southwest	Day 1 Day 2	7 Day Fire Potential	Briefing	Monthly	Seasonal
Southern California	Daily	7 Day Fire Potential	Briefing	Monthly	Seasonal

http://www.predictiveservices.nifc.gov/outlooks/outlooks.htm

National Weather Service

Fire Weather

http://radar.srh.noaa.gov/fire/

NWS Home | NWS News | NWS Offices | Search for: | NWS | All NOAA | Go

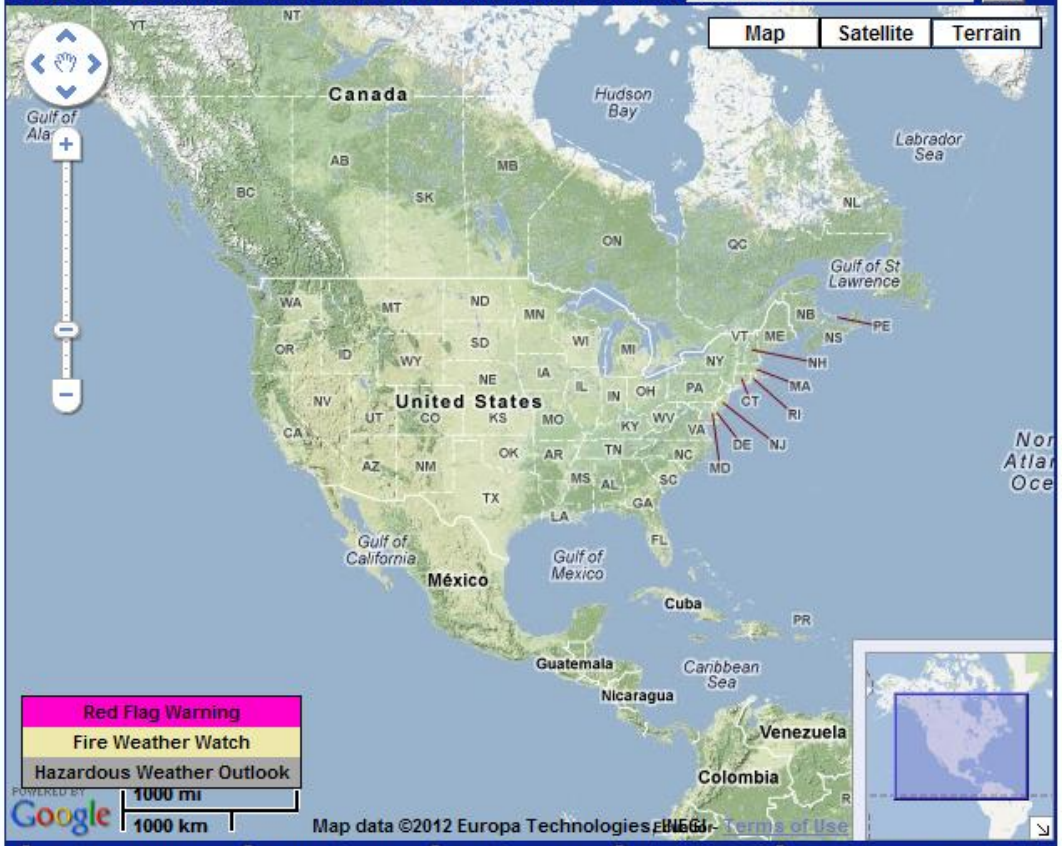
EXPERIMENTAL... EXPERIMENTAL... EXPERIMENTAL... EXPERIMENTAL... EXPERIMENTAL... EXPERIMENTAL... EXPERIMENTAL... EXPERIMENTAL...

Fire Weather News

- Click here to take the 2011 NWS Customer Satisfaction Survey, which includes the opportunity to provide feedback on NWS fire weather services.
- Click here to learn more about this site's capabilities. Information about this experimental product can be found here. We also encourage your comments or suggestions for improvements using the electronic survey provided.
- The general relationship between NWS and the interagency fire management community is set forth in the National Interagency Agreement for Meteorological and Other Technical Services

+ Current Hazards
+ Fire Situation
+ Forecasts
+ Current Conditions
+ Outlooks
+ Drought/Precip
+ Fuels
+ Air Quality
+ Admin
+ GACCs
+ Other Agencies

Click desired location on map for forecast and additional information or Enter Location Go



Watches/Warnings | Large Incidents | Spot Forecasts | Day-1 Precip | IMET Locations

SPC Fire WX Outlooks: Day-1 | Day-2 | Days 3-8

'Enter Location' by...	example
Address	125 South State Street Salt Lake City, UT
City	Modesto, CA
ZIP Code	83204
County	Valley County, MT
Lat/Lon	42.86 N, 112.41 W
Misc.	Grand Canyon

Get info in KML format	
Current Warning Products	KML
Large Incidents	KML
Spot Forecast Requests	KML
Day-1 Precip. Forecast	KML
SPC Fire Weather Outlooks	KML
IMET Locations	KML

View map by GACC Region...

Today's Outlook | Tomorrow's Outlook | Day 3-8 Outlook

Storm Prediction Center

http://www.spc.noaa.gov/products/fire_wx/

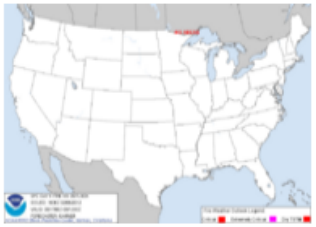
Site Map | News | Organization

Fire Weather Outlooks

Updated: Wed Feb 8 16:39:03 UTC 2012 (2h 45m ago)

Current Fire Weather Outlooks (Product Info)

Current Day 1 Fire Weather Outlook



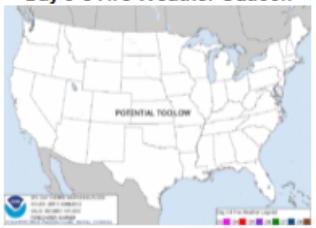
Forecaster: GARNER
Issued: 081636Z
Valid: 081700Z - 091200Z
Forecast Risk of Fire Weather: No Critical Areas

Current Day 2 Fire Weather Outlook

Forecaster: GARNER
Issued: 081637Z
Valid: 091200Z - 101200Z
Forecast Risk of Fire Weather: No Critical Areas

Day 3-8 Fire Weather Outlooks (Product Info)

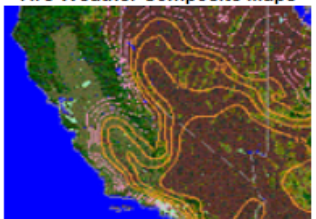
Day 3-8 Fire Weather Outlook



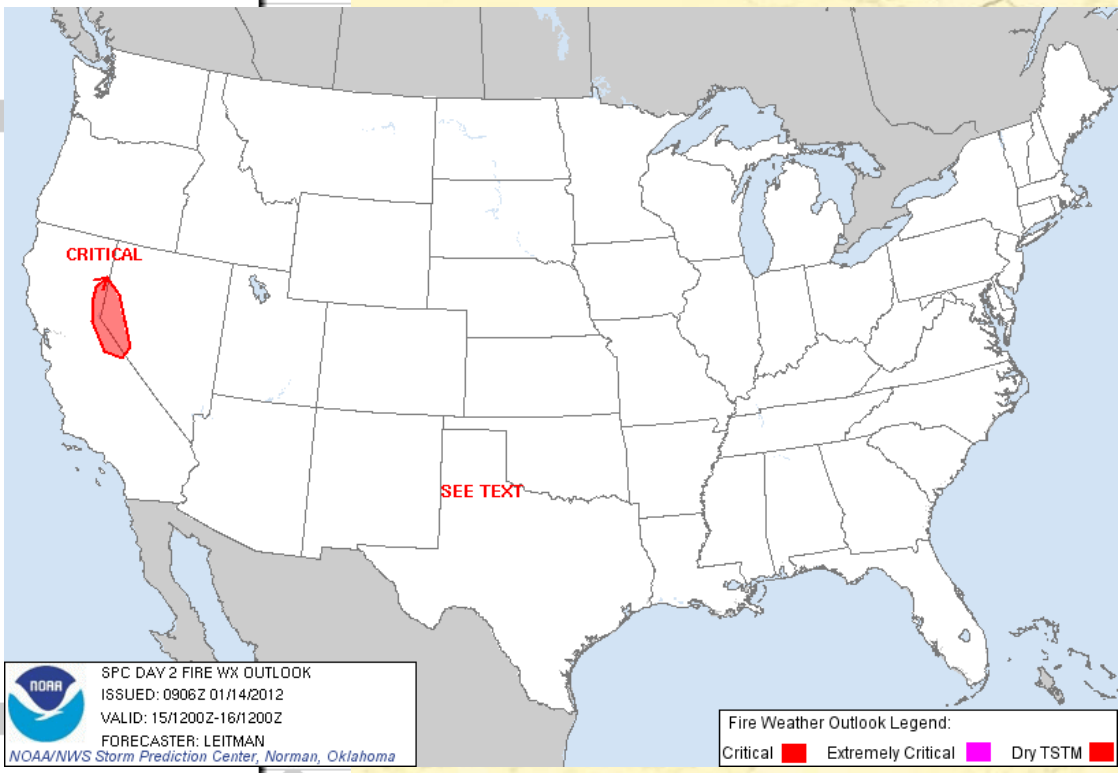
Forecaster: GARNER
Issued: 072026Z
Valid: 09/1200Z-15/1200Z
Note:The day 3-8 fire weather outlooks became operational June 12, 2007. From April 19, 2011 to November 30, 2011, SPC will issue Experimental Probabilistic Fire Weather Dry Thunder and Strong Wind Outlooks.

Fire Weather Forecast Tools

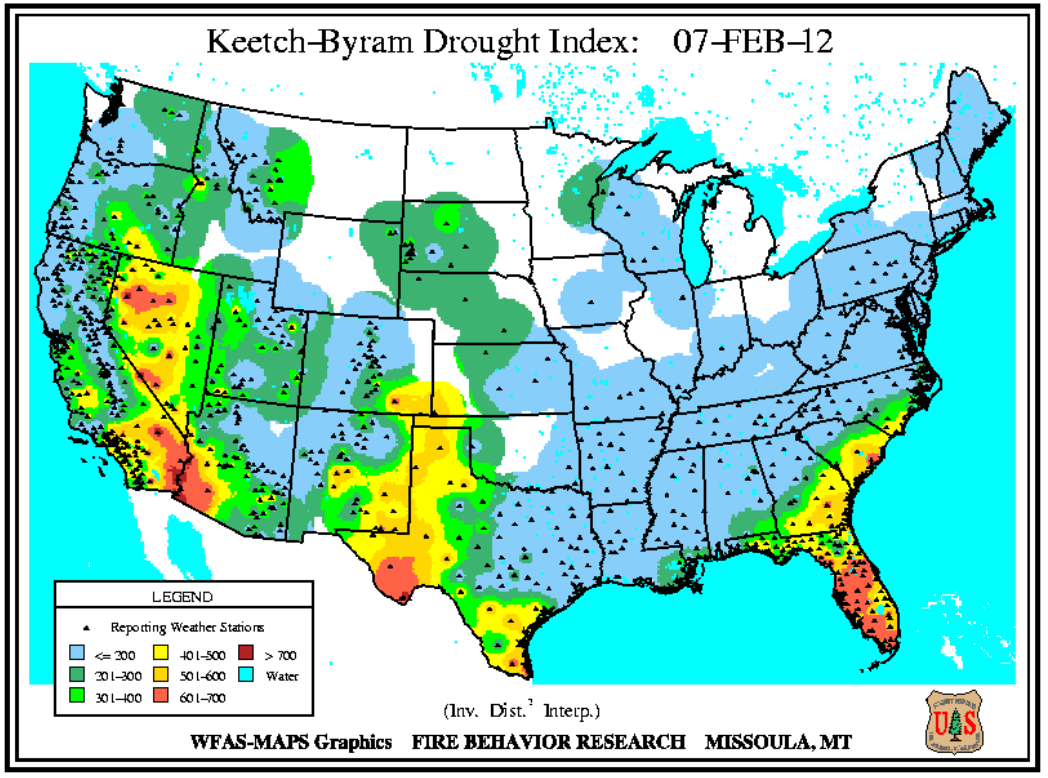
Fire Weather Composite Maps

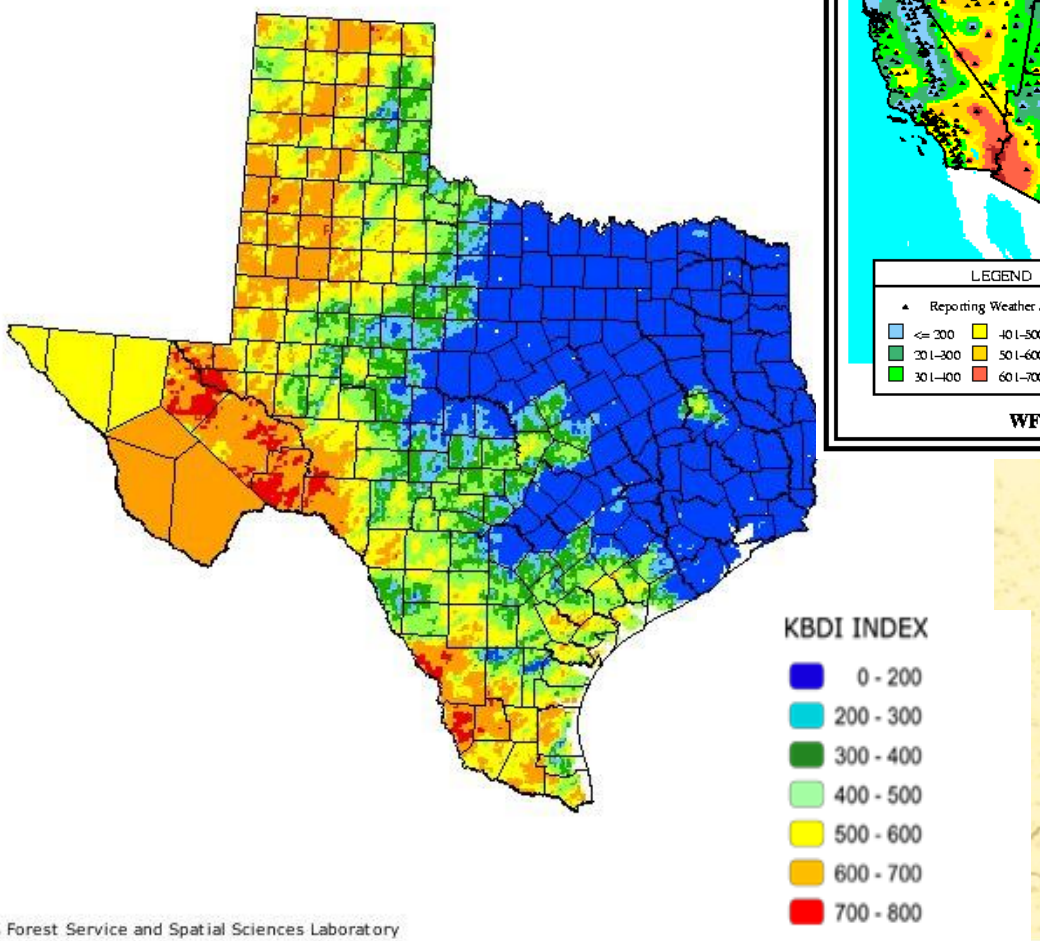


Forecast and observational maps for various fire weather variables based on the Eta and RUC models.



Keetch-Byram Drought Index





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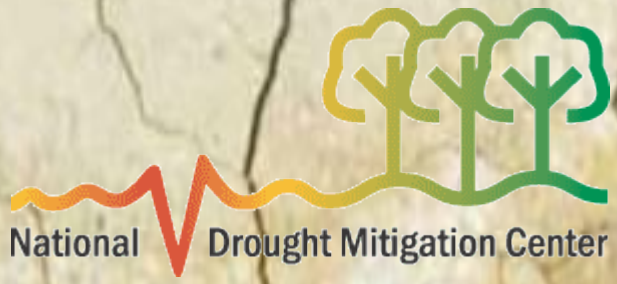
University of Nebraska-Lincoln



Fire Weather Outlooks from the Storm Prediction Center

(Days 1-8)

Phillip Bothwell-Storm Prediction Center

February 9, 2012

NCEP

WHERE AMERICA'S CLIMATE AND WEATHER SERVICES BEGIN

Fire is a natural force that shapes the ecosystem.

On average, wildfires burn about 5.5 million acres per year in the United States.

Smoke from these wildfires has the potential to affect the health of millions…far removed from the actual fire(s).

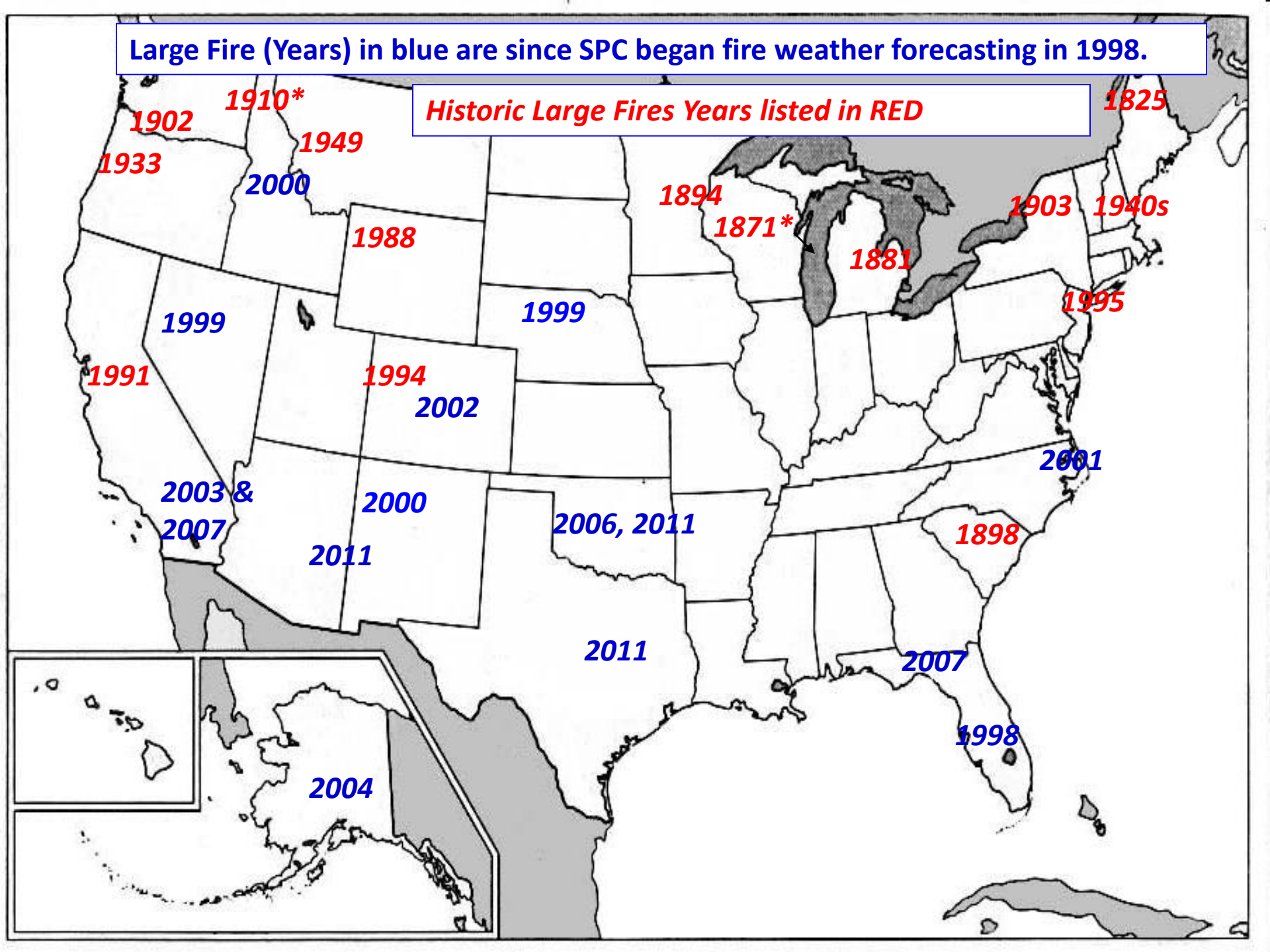
The damage and intensity of wildfires has increased for a number of reasons (excluding climate change).

1) Past fire-suppression policies that have created the accumulation of fuel, and excessive plant overgrowth in forests and woodlands. Insects and disease have increased in the forests… without fire.

2) Increasing residential development in already fire prone areas (houses are "fuel")
The Wildland-Urban Interface (WUI)

3) Volatile fuel growth in already fire prone areas.

Fires can occur virtually anyplace in the U.S.


Large Fire (Years) in blue are since SPC began fire weather forecasting in 1998.
Historic Large Fires Years listed in RED
1910*
1902
1949
1933
2000
1988
1999
1991
1994
2002
2003 &
2007
2000
2011
1999
2006, 2011
2011
2004
1825
1894
1871*
1903
1940s
1881
1995
2001
1898
2007
1998

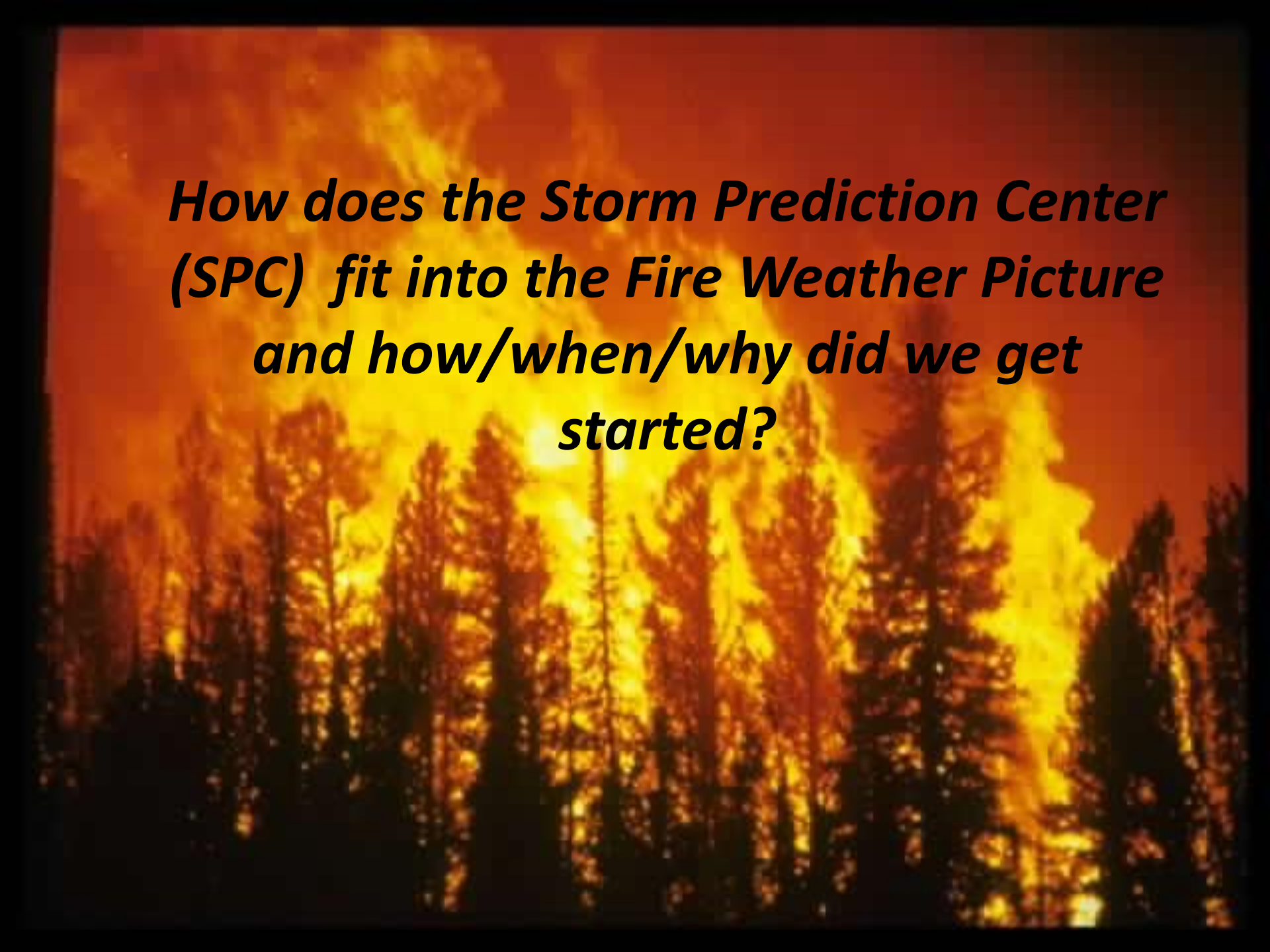
Two Large events prior to SPC issuing fire weather outlooks that helped to shape our program…

Oakland California fire 1991

One of the largest losses of structures/homes ever recorded…over 3000 (in one day) and very large loss of life (in recent decades)

Deaths.....25
Injuries.....150
Single Family Dwellings Destroyed.....2,843
Single Family Dwellings Damaged.....193
Apartment Units Destroyed.....433
Total Living Units Damaged or Destroyed.....3,469
Total Acreage Burned by the Fire.....1,520
Fire Perimeter.....5.25 Miles
Estimated Dollar Fire Loss.....$1,537,000,000

1995 Long Island Wildfires - Wildland Urban Interface area


How does the Storm Prediction Center (SPC) fit into the Fire Weather Picture and how/when/why did we get started?

History of SPC Fire Weather Outlooks

Imagine those first years at SELS/NSSFC (SPC) in the 1950s!

- ***1996*** – Request from Fire Weather Modernization Team to SPC to provide national fire weather guidance. Confirmed in "Vision 2005" **(following years of devastating fires across the nation)**
- ***1997*** – Initial development begins with June 1998 target date for experimental outlooks.
- ***1998*** – June 1998 – Initial experimental Day 1 and Day 2 outlooks (text and graphics on Web). Year end survey of Regions and WFOs.
- ***1999*** – First full year of experimental outlooks. Risk Categories (1 to 5) introduced.
- ***2000*** – Operational product on AWIPS (and Web) on May 17. Critical, extremely critical, and dry thunderstorm areas replaced the 5 "risk Categories", resulting in smaller and fewer areas issued less often.
- ***2001*** – "See Text" added. Forecasters Fire Weather "Chat room". Verification efforts greatly expanded.
- ***2005*** – addition of experimental Day 3 through 8 fire weather outlook graphic.
- ***2006*** – addition of text to go with the Day 3-8 graphic
- ***2007*** – June 12 Day 3-8 Fire Weather Outlook became official product
- ***2010*** – Day 1 and Day 2 updates during day shift...Day 3-8 moved to day shift!
- ***2011*** – SPC issues Experimental Probabilistic Fire Weather Dry Thunder and Strong Wind Outlooks.

NWS FIRE WEATHER SERVICE

(FROM LARGE TIME/SPACE SCALES TO INDIVIDUAL FIRES)

- ***CPC*** – Seasonal and Monthly Forecasts, 3 to 14 day Hazards Assessment, Weekly ENSO (El Niño-Southern Oscillation) and Drought Monitor, 6-10 day (and 8-14 day) temperature and precipitation Outlooks
- ***HPC*** – Fronts/pressure systems (day 3-7)
- ***SPC*** – 1 and 2 Day Fire Weather Outlooks and days 3 through 8 experimental
- ***WFOs*** – Fire Weather Watches and Red Flag Warnings, Spot Forecasts
- ***IMETs*** – Incident METeorologists – Fire/Hazards Weather Forecasts for local fires

SPC Fire Weather Outlooks cover

- Dry…windy conditions
- Dry thunderstorms…storms with lightning but producing little or no precipitation (generally less than 0.10 inch)

NOAA's National Weather Service

Storm Prediction Center

Local forecast by "City, St" or "ZIP"
City, St Go

Find us on Facebook
SPC on Facebook

NCEP Quarterly Newsletter

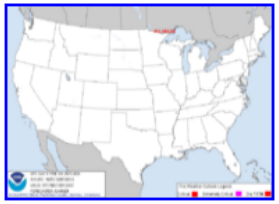
Home
SPC Products
All SPC Forecasts
Current Watches
Meso. Discussions
Conv. Outlooks
Tstm. Outlooks
Fire Wx Outlooks
RSS Feeds
E-Mail Alerts
Weather Information
Storm Reports
NWS Hazards Map
Watch/Warning Map
National RADAR
Product Archive
Norman, OK WX
NOAA Weather Radio
Research
Non-op. Products
Forecast Tools
Svr. Tstm. Events
SPC Publications
SPC-NSSL HWT
Education & Outreach
About the SPC
SPC FAQ
About Tornadoes
About Derechos
WCM Page
Enh. Fujita Page
Cool Images
Our History
Public Affairs
Misc.

Fire Weather Outlooks

Updated: Tue Feb 7 16:28:04 UTC 2012 **(5h 17m ago)**

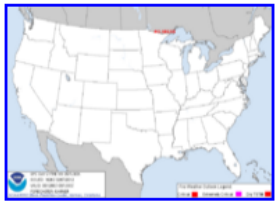
Current Fire Weather Outlooks (Product Info)

Current Day 1 Fire Weather Outlook



Forecaster: GARNER
Issued: 071625Z
Valid: 071700Z - 081200Z
Forecast Risk of Fire Weather: No Critical Areas

Current Day 2 Fire Weather Outlook



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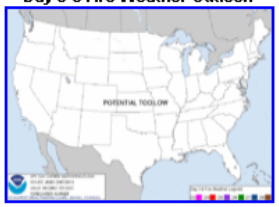
Valid: 081200Z - 091200Z
Forecast Risk of Fire Weather: No Critical Areas

Day 3-8 Fire Weather Outlooks (Product Info)

Day 3-8 Fire Weather Outlook



Forecaster: GARNER
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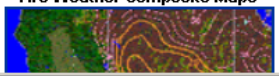
Valid: 09/1200Z-15/1200Z
Note: The day 3-8 fire weather outlooks became operational June 12, 2007. From April 19, 2011 to November 30, 2011, SPC will issue Experimental Probabilistic Fire Weather Dry Thunder and Strong Wind Outlooks.

Fire Weather Forecast Tools

Fire Weather Composite Maps

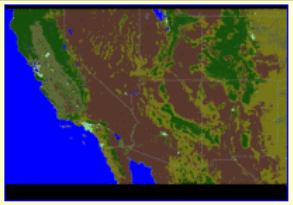


SPC Fire Weather Analysis Page

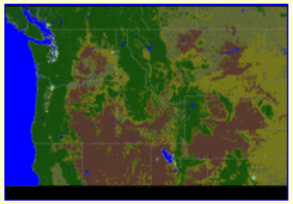
Storm Prediction Center **Norman, Oklahoma**

UPDATE STATUS---> SW Area finished processing 12Z run at: 16:04:10 CT | NW Area finished processing 12Z run at: 16:08:16 CT | Floater finished processing 12Z run at: 16:12:46 CT

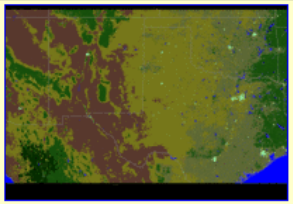
Choose a region below to view analysis



Southwest U.S



Northwest U.S

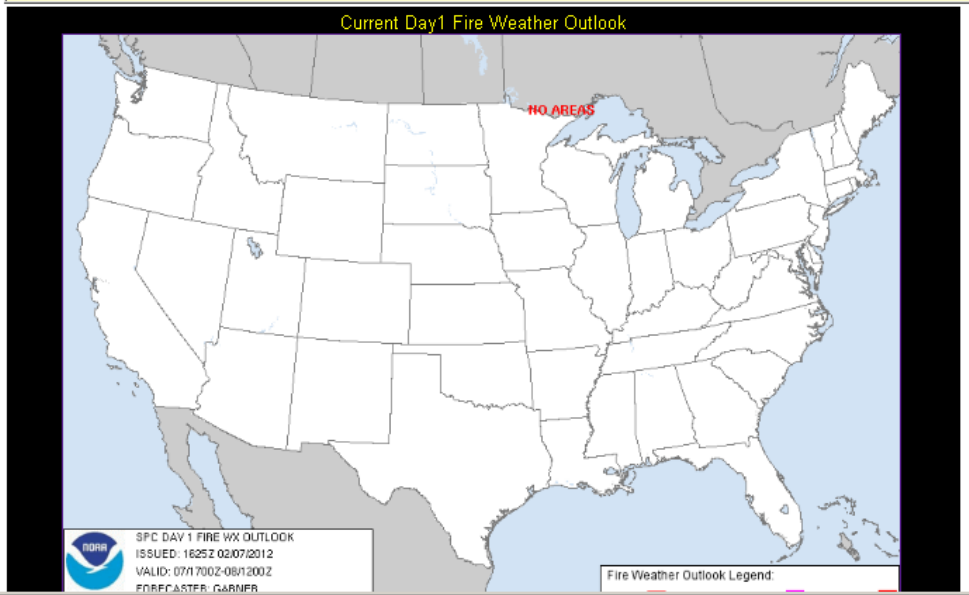


Floater Region

The SPC is generating short-term model graphics and current analysis graphics containing weather parameters commonly used for fire weather forecasting. These plots can be overlayed onto either a satellite image depicting active fires, or a land-use image. Two of the regions will stay set over the western U.S., the third "floater region" will be set by the SPC fire weather forecaster based on areas described in the Day 1 or Day 2 Fire Weather Outlooks.

The forecast fields are calculated from the latest available Nam Model. The objective analysis (SPC OA) data are produced from a 2-pass Barnes objective analysis using the latest available hourly surface data and RUC forecast.

The current weather fields will update hourly throughout the day and can be used to compare or verify the short-term model forecasts and outlooks over areas of concern. This type of mesoscale information will primarily assist the forecaster with a need to quickly ascertain fire weather conditions during the afternoon and evening hours of the Day 1 period.



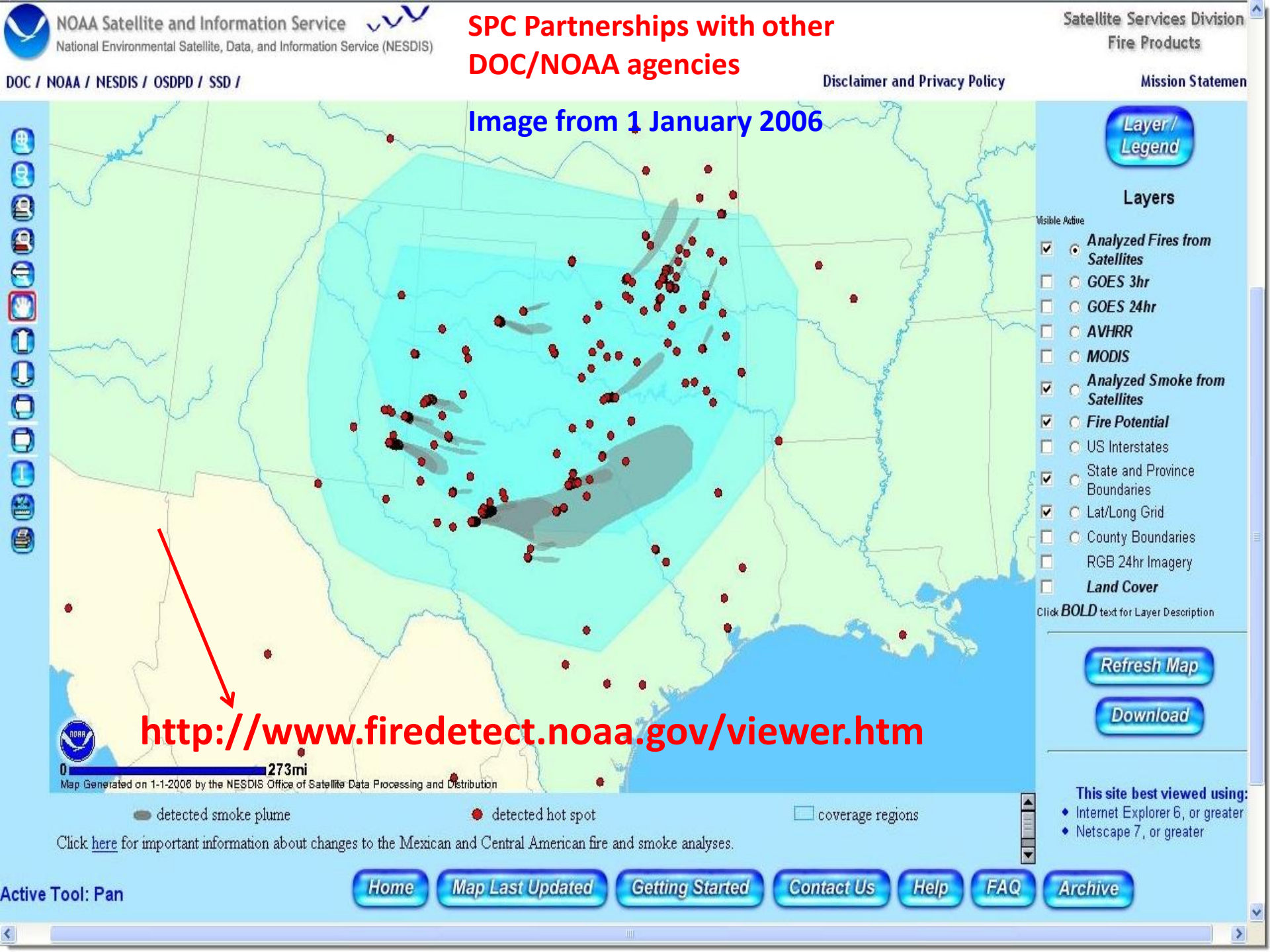
Fire Weather Outlook

Fire behavior analyst, JOHN MCCOLGAN took this photo while on the Sula Complex fire just north of Sula, Montana, on August 6, 2000. John is a Bureau of Land Management employee for the Alaska Fire Service in Ft. Wainwright, Alaska.

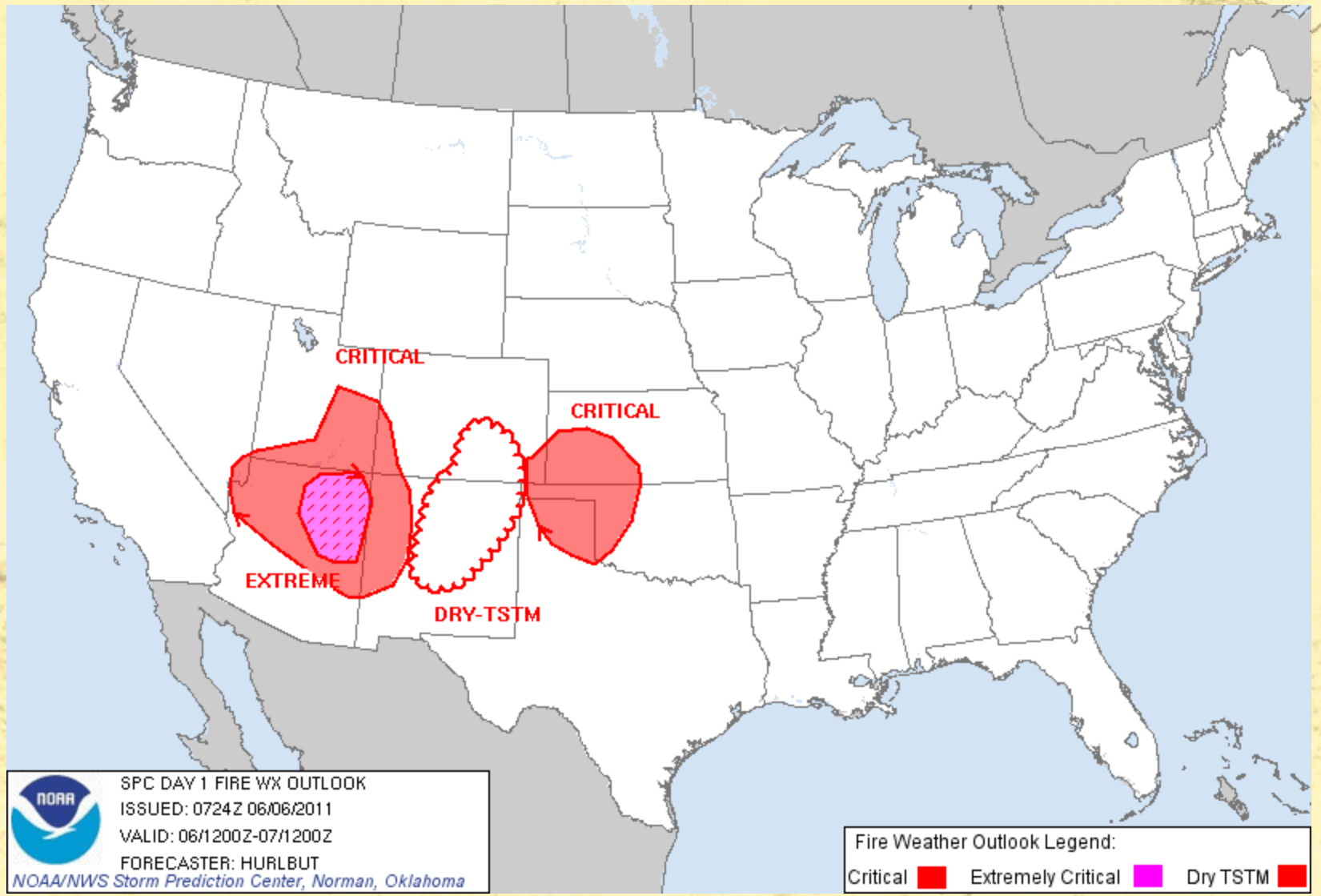
- **Three Types of Areas**
  - **Critical**
  - **Extremely Critical**
  - **Dry Thunderstorm**
    - **Also…"See Text" for marginal areas**

Storm Prediction Center
Norman, Oklahoma

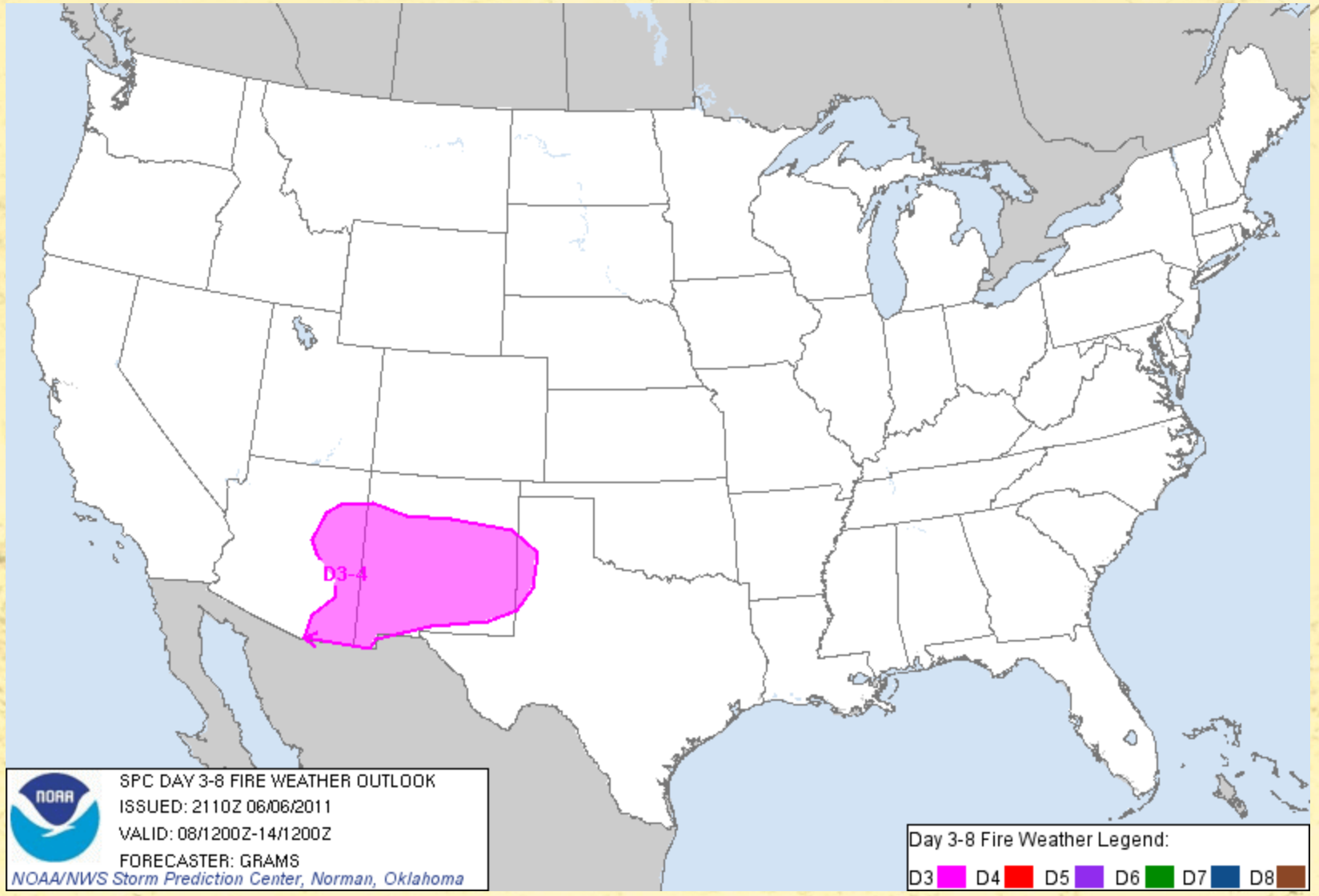
SPC Partnerships with other DOC/NOAA agencies



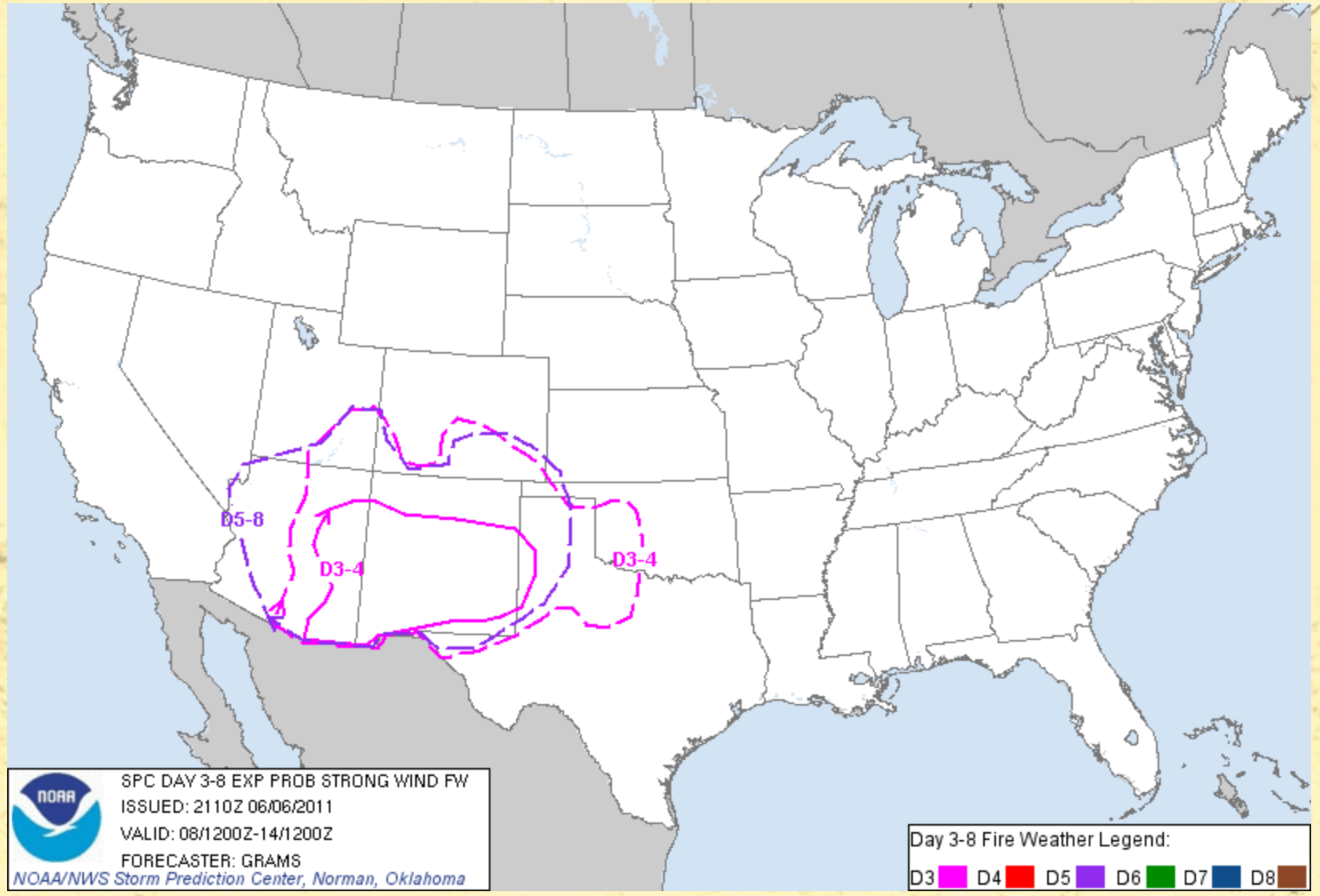
Day 1 Fire Weather Outlook - example



Day 3-8 Fire Weather Outlook - example



Experimental Day 3-8 Fire Weather Outlook



Wildland Fire Statistics

Nation-wide: 2001 to 2010 average

Lightning started wildfires are responsible for around 14.6% of all wildfires (from 10 to 20%)

Yet, lightning started wildfires are responsible for 61% of total acres burned (from 35 to 88%).

Importance of Lightning Forecasts

- **The Goal**: **Fight wildfires in the earliest stages**
  - ✓**While we won't stop the lightning and lightning started fires…fire growth can be mitigated and smoke management/air quality can be improved by more accurate lightning forecasts - leading to better advance placement of resources (men and machinery)**

Fires are either <u>lightning</u> or human caused!

- **Those started by lightning account for more than 60 percent of all total acreage burned each year (NIFC(2001-2010)).**
- **In 2000, during one of the most severe fire seasons on record, lightning started 18,417 wildfires.**
- **Lightning caused more than 99% of the wildfires across the Northern Rockies. In addition, lightning killed two fire fighters.**
- **<u>At that time</u>, it required the largest peacetime mobilization of resources in our nation's history.**

A Rare, but major dry thunderstorm event…Northern CA.

June 20-21 2008

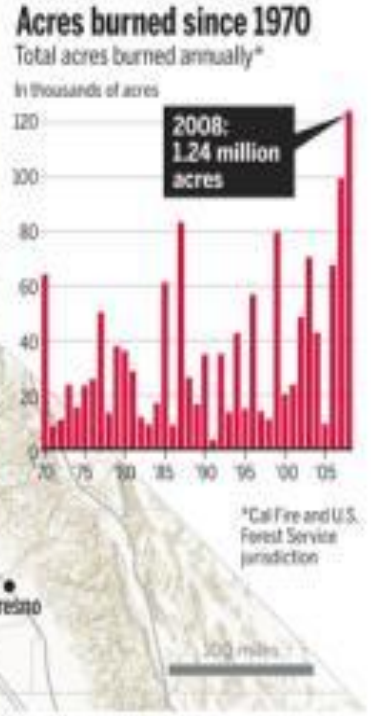
Responsible for *90%* of acres burned.

2008 fire season

Through Nov. 5, wildland fires had burned more acres in California this year than in any year back to 1970, the first year that consistent, modern records were kept. But because of a June lightning storm and milder weather later in the summer, the 10 biggest fires all occurred in Northern California, and many were in rural, unpopulated areas.

	Fire name	County	Start	Contained	Acres burned
1	Bear Wallow Complex	Siskiyou	June 21	Sept. 30	192,038
2	Basin Complex	Monterey	June 21	July 27	162,818
3	Iron Complex & Alps Complex	Trinity	June 21	Sept. 9	105,805
4	Lime Complex	Trinity	June 20	Aug. 15	98,715
5	Yolla Bolly Complex (merged with Lime Complex)	Mendocino/ Tehema	June 21	Aug. 20	89,994
6	Siskiyou / Blue 2 Complex	Siskiyou	June 21	Sept. 30	82,186
7	Indians	Monterey	June 8	July 10	76,554
8	Panther	Siskiyou	July 24	Sept. 30	72,344
9	Mendocino Lightning Complex	Mendocino	June 20	July 17	54,819
10	BTU Lightning Complex	Butte	June 21	July 29	54,000

Source: Cal Fire and U.S. Forest Service

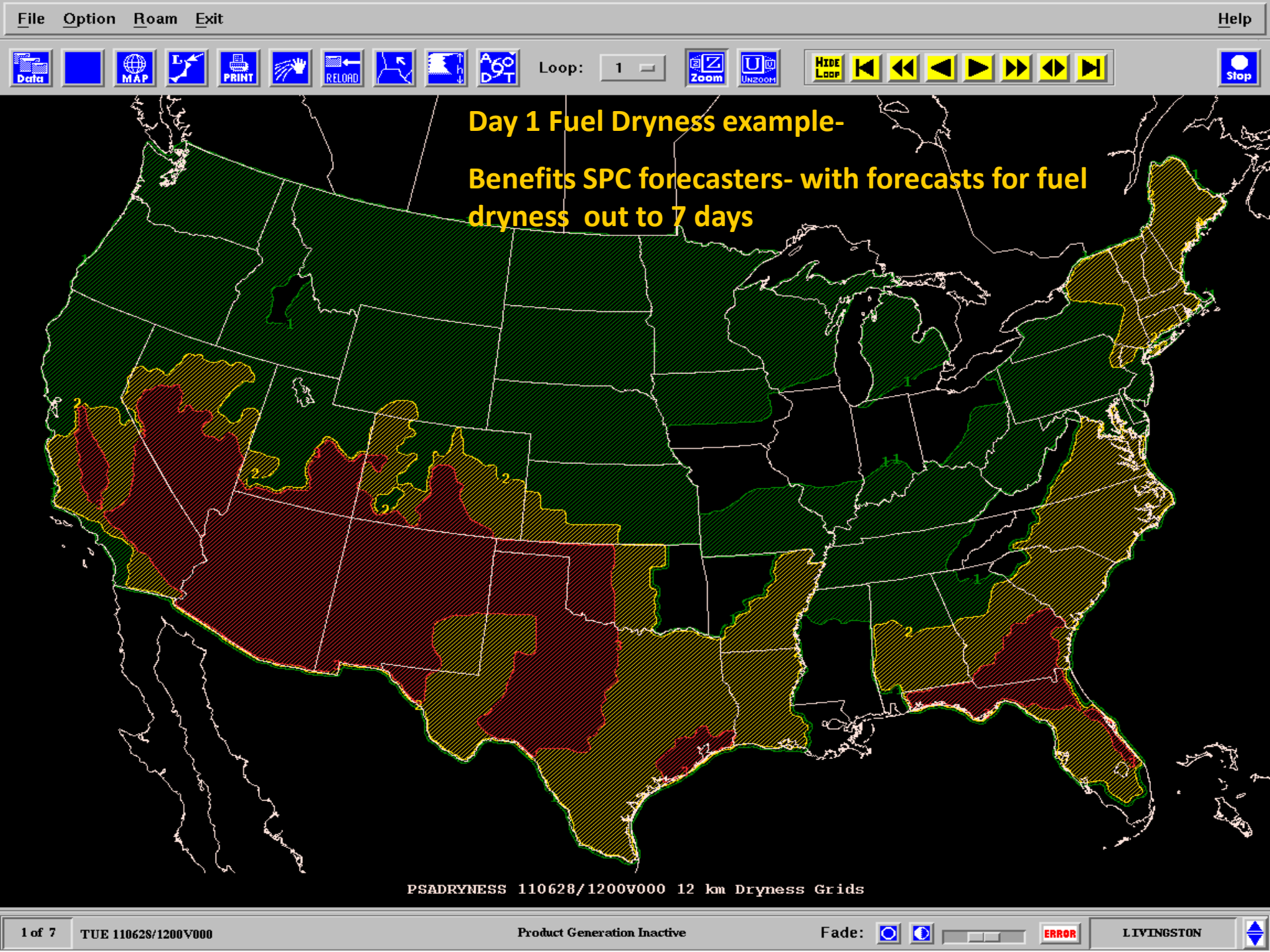


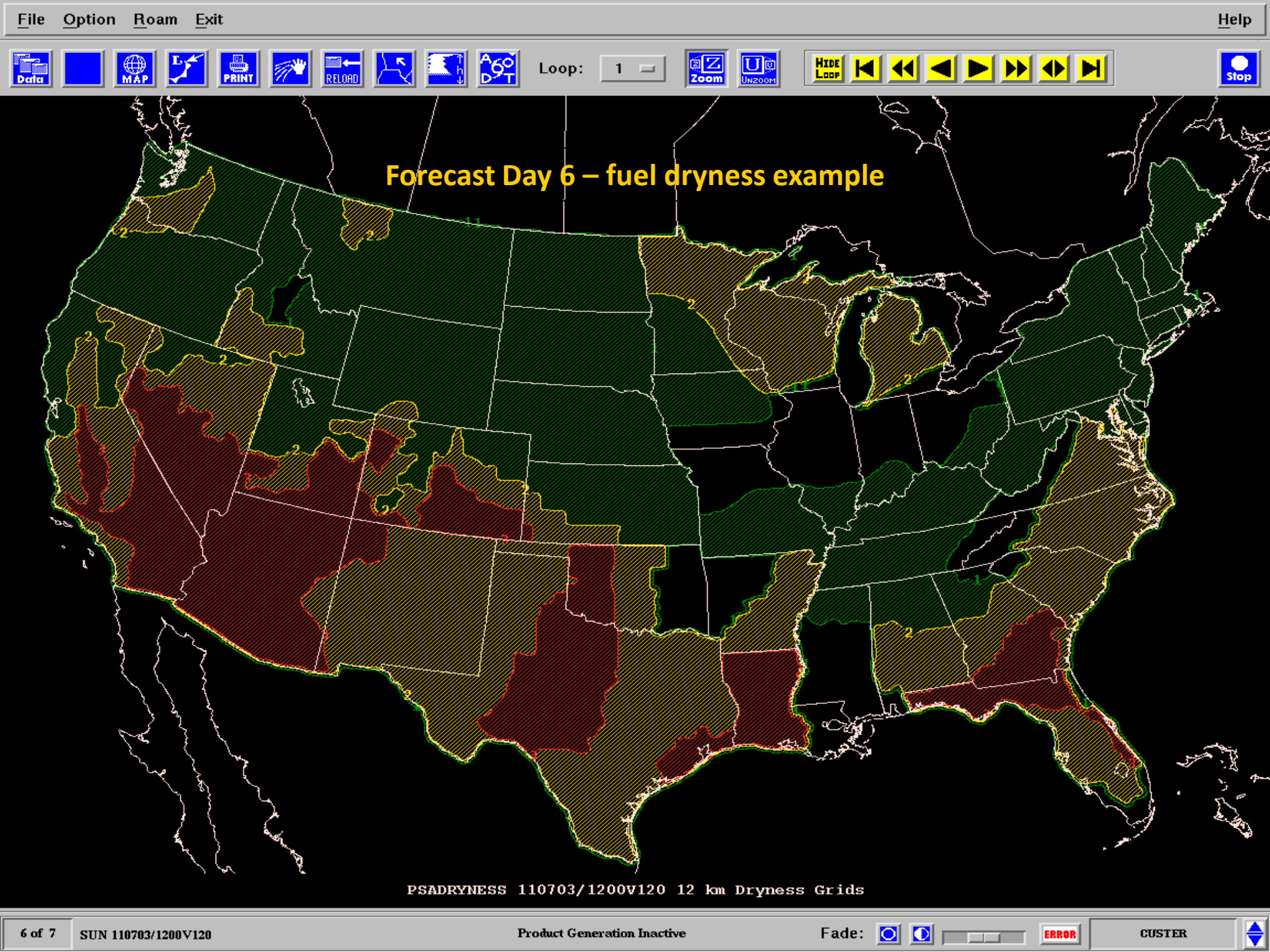
Source: Mercurynews.com

Data available at the SPC

1. METAR, RAWS, WIMS, and MESOWEST
2. Real-time and archived lightning data
3. Lightning Climatologies
4. Accumulated precipitation maps (ground & radar based)
5. National 2 and 4 km Radar images (precip accumulation)
6. Satellite images (bio-mass burning algoritm) of wildfires
7. 1 km resolution land use & high resolution terrain images.
8. Weekly Drought Monitor graphic.
9. All fire wx text forecasts, watches and warnings.
10. Model displays at 3-hour time resolution designed for fire weather forecasting (degrees F, RH (%), and wind (mph).
11. Short Range Ensemble Forecasts (SREF) and Perfect Prog Lightning Forecasts

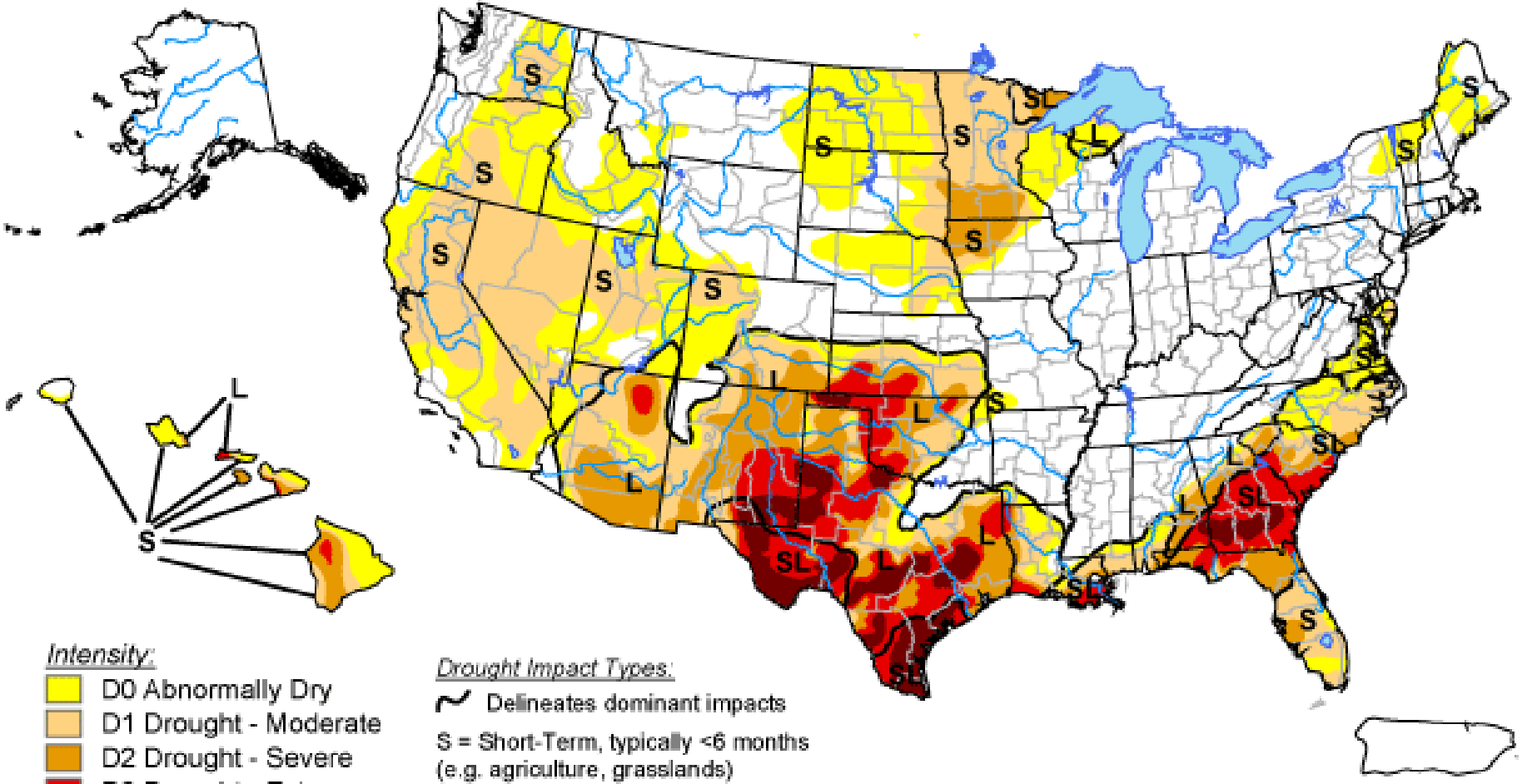
And … Fuel Dryness forecasts out to 7 days


File Option Roam Exit Help
Data MAP PRINT RELOAD Loop: 1 Zoom Unzoom Hide Loop Stop
Day 1 Fuel Dryness example-
Benefits SPC forecasters- with forecasts for fuel dryness out to 7 days
PSADRYNESS 110628/1200V000 12 km Dryness Grids
1 of 7 TUE 110628/1200V000 Product Generation Inactive Fade: ERROR LIVINGSTON


File Option Roam Exit Help
Data MAP PRINT RELOAD Loop: 1 Zoom Unzoom Hide Loop Stop
Forecast Day 6 – fuel dryness example
PSADRYNESS 110703/1200V120 12 km Dryness Grids
6 of 7 SUN 110703/1200V120 Product Generation Inactive Fade: ERROR CUSTER

U.S. Drought Monitor

January 31, 2012
Valid 7 a.m. EST



Intensity:
- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

Drought Impact Types:

Delineates dominant impacts

S = Short-Term, typically <6 months (e.g. agriculture, grasslands)

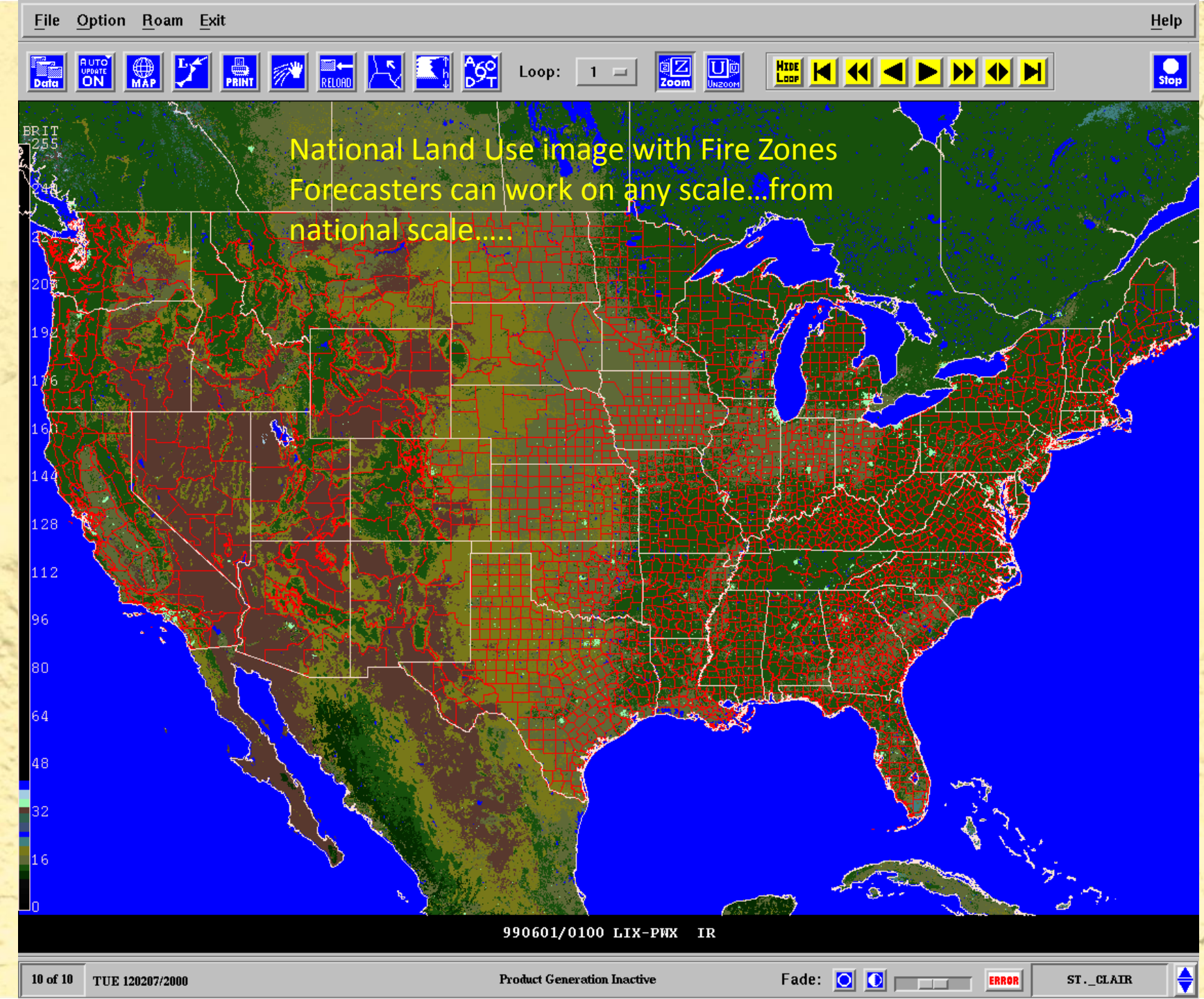
L = Long-Term, typically >6 months (e.g. hydrology, ecology)

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

http://droughtmonitor.unl.edu/

Released Thursday, February 2, 2012

Author: Eric Luebehusen, U.S. Department of Agriculture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National Land Use image with Fire Zones
Forecasters can work on any scale…from national scale…..
990601/0100 LIX-PWX IR
10 of 10
TUE 120207/2000
Product Generation Inactive
Fade:
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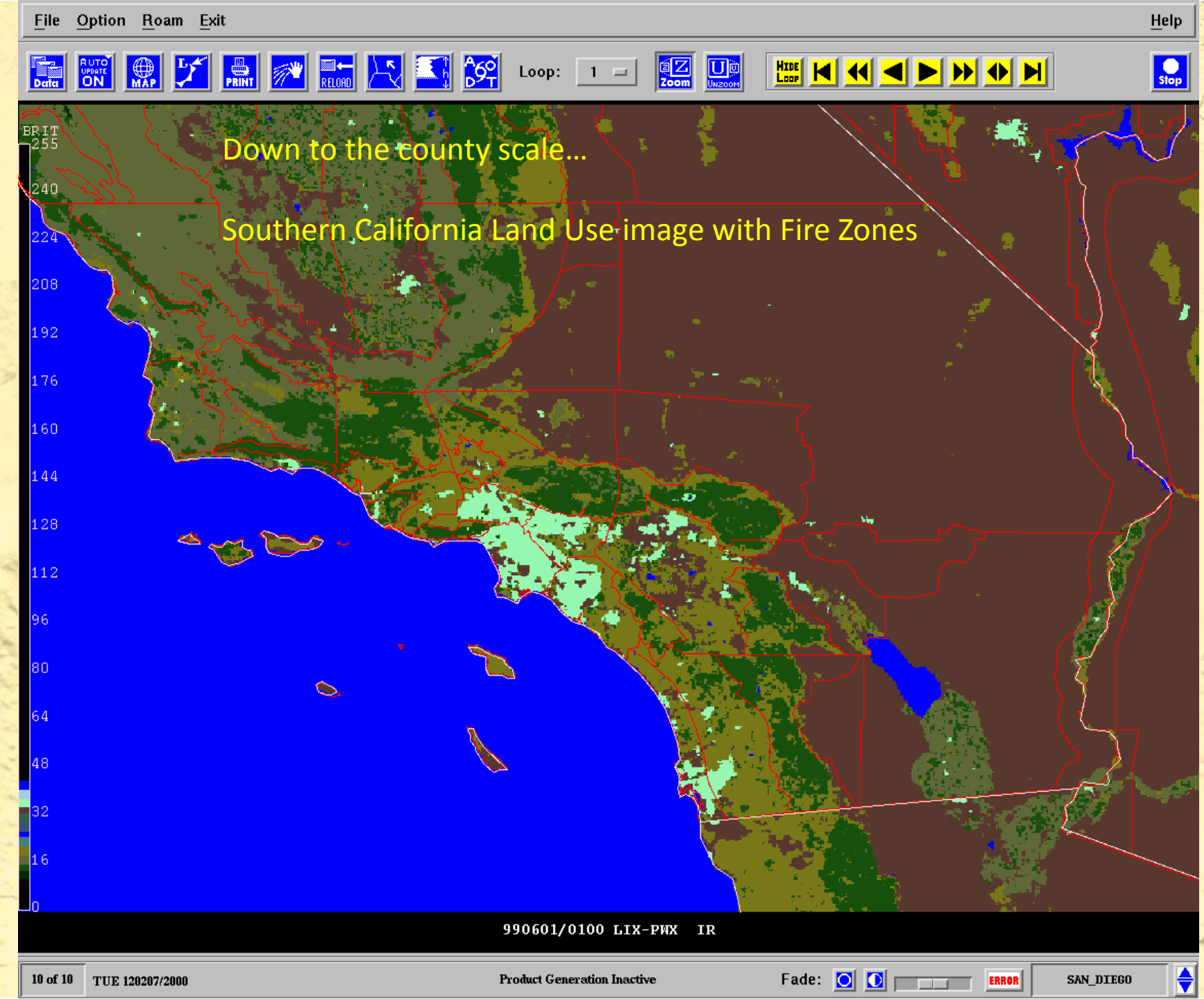
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Down to the county scale…
Southern California Land Use image with Fire Zones
990601/0100 LIX-PWX IR
10 of 10
TUE 120207/2000
Product Generation Inactive
Fade:
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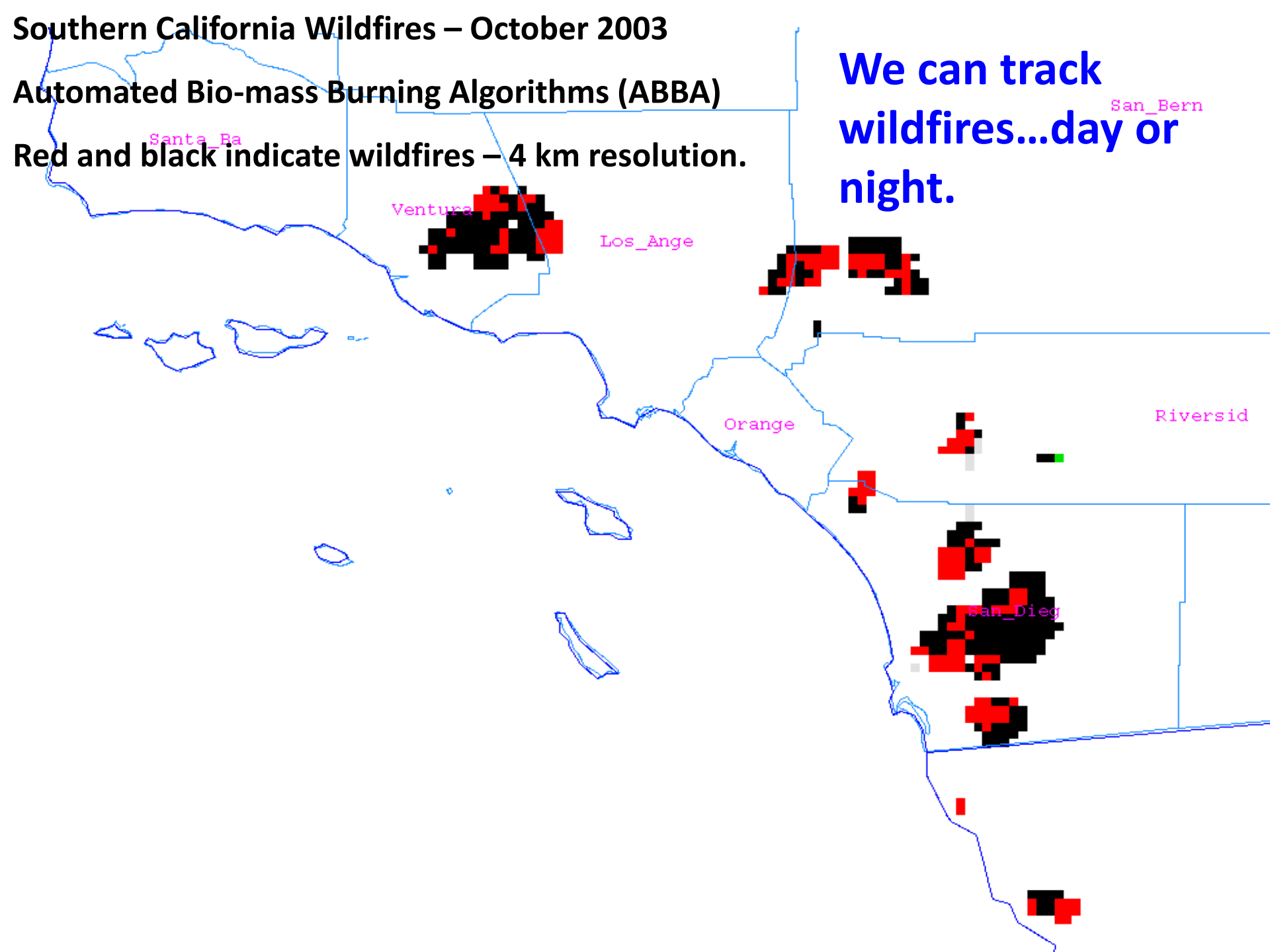
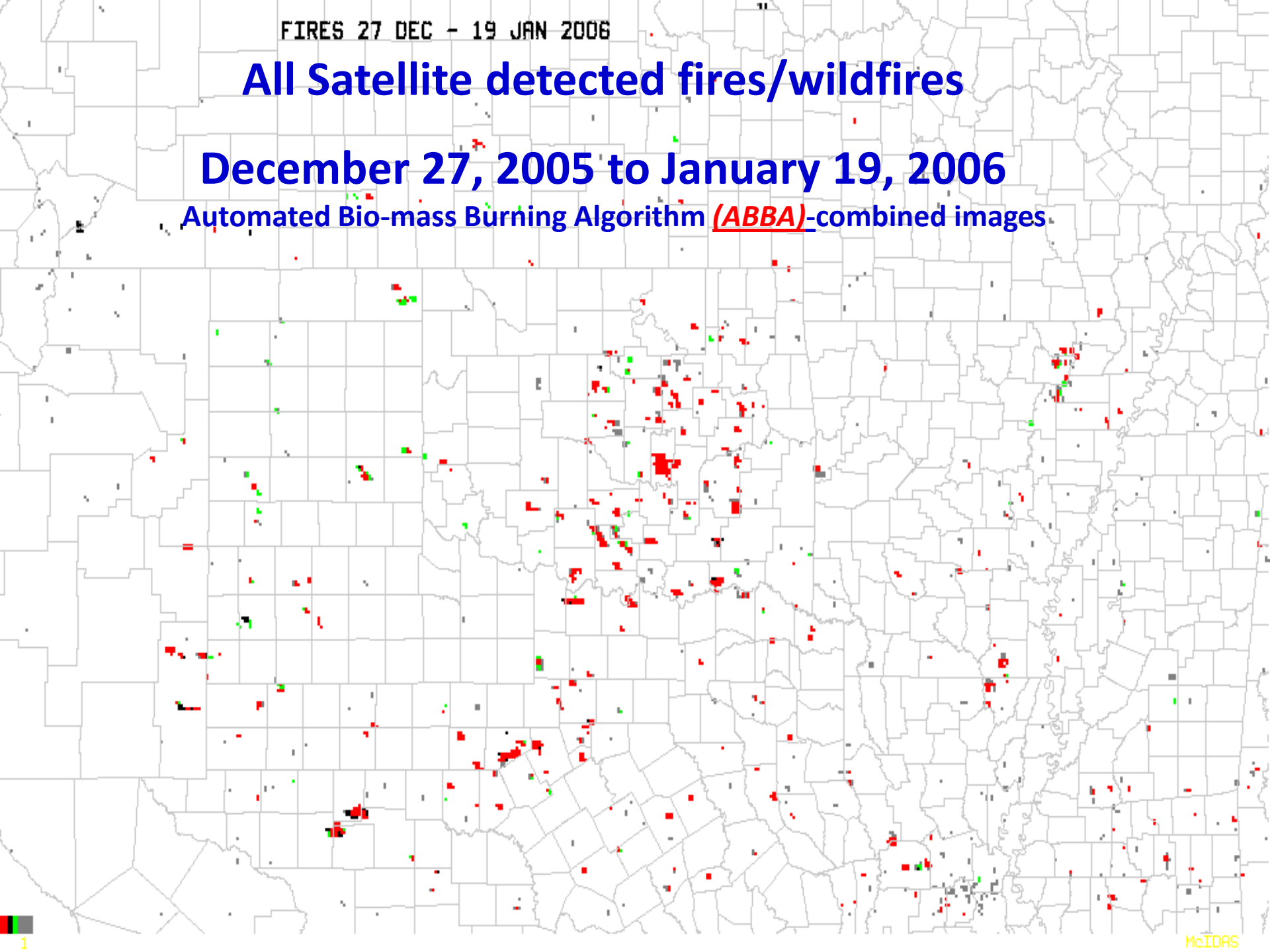
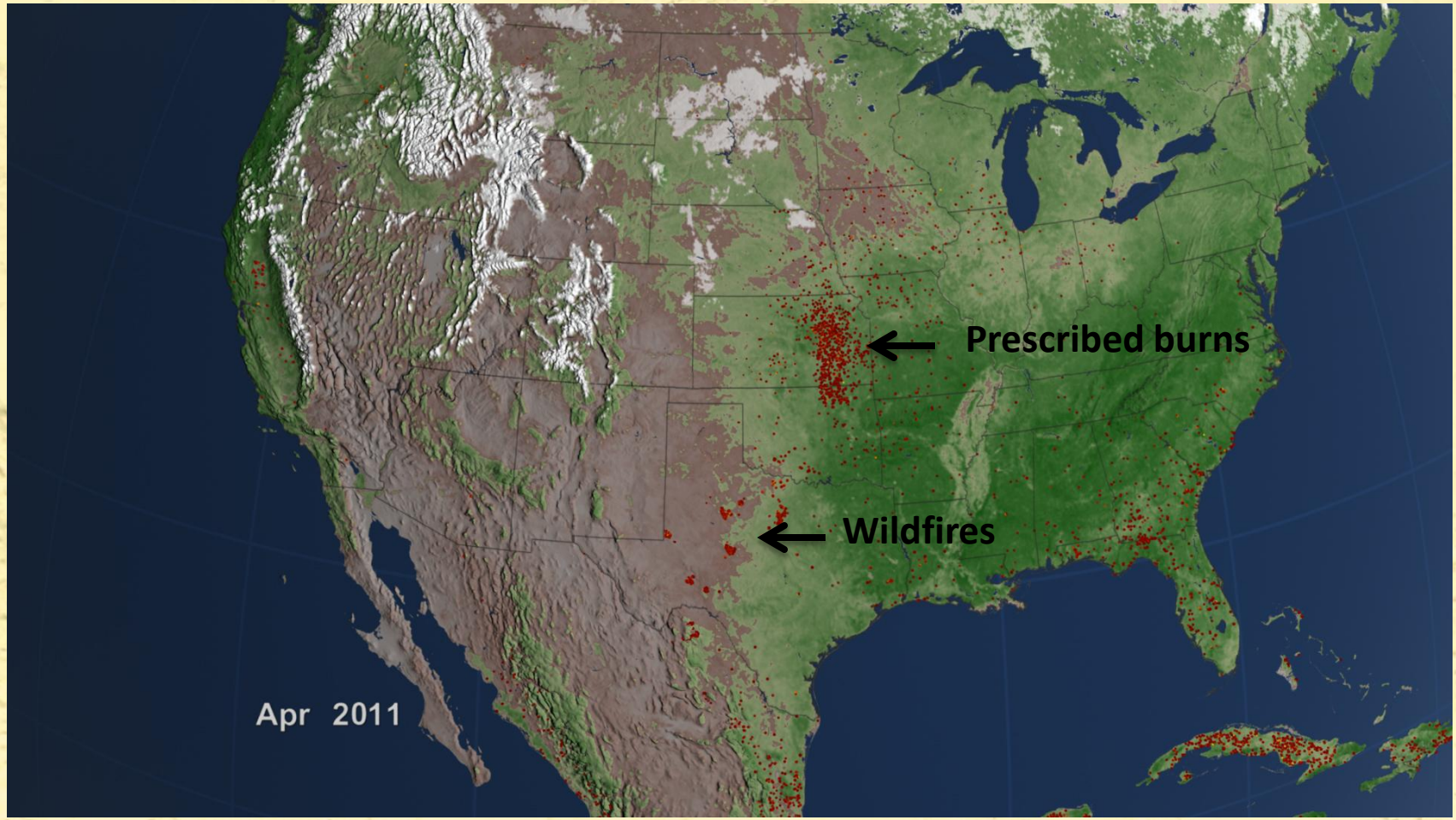

Southern California Wildfires – October 2003
Automated Bio-mass Burning Algorithms (ABBA)
Red and black indicate wildfires – 4 km resolution.
We can track wildfires…day or night.
Santa_Ba
Ventura
Los_Ange
San_Bern
Orange
Riversid
San_Dieg


FIRES 27 DEC - 19 JAN 2006
All Satellite detected fires/wildfires
December 27, 2005 to January 19, 2006
Automated Bio-mass Burning Algorithm (ABBA)-combined images
1
McIDAS

*Satellite instruments observed large actively-burning wildfires in Texas this April. To the north, agricultural fires dot the landscape across Oklahoma and Kansas. The brightest fires, as observed by the MODIS (*Moderate Resolution Imaging Spectroradiometer*) instrument, are shown in orange and yellow. (Credit: NASA)*

One way we can keep track of fires…

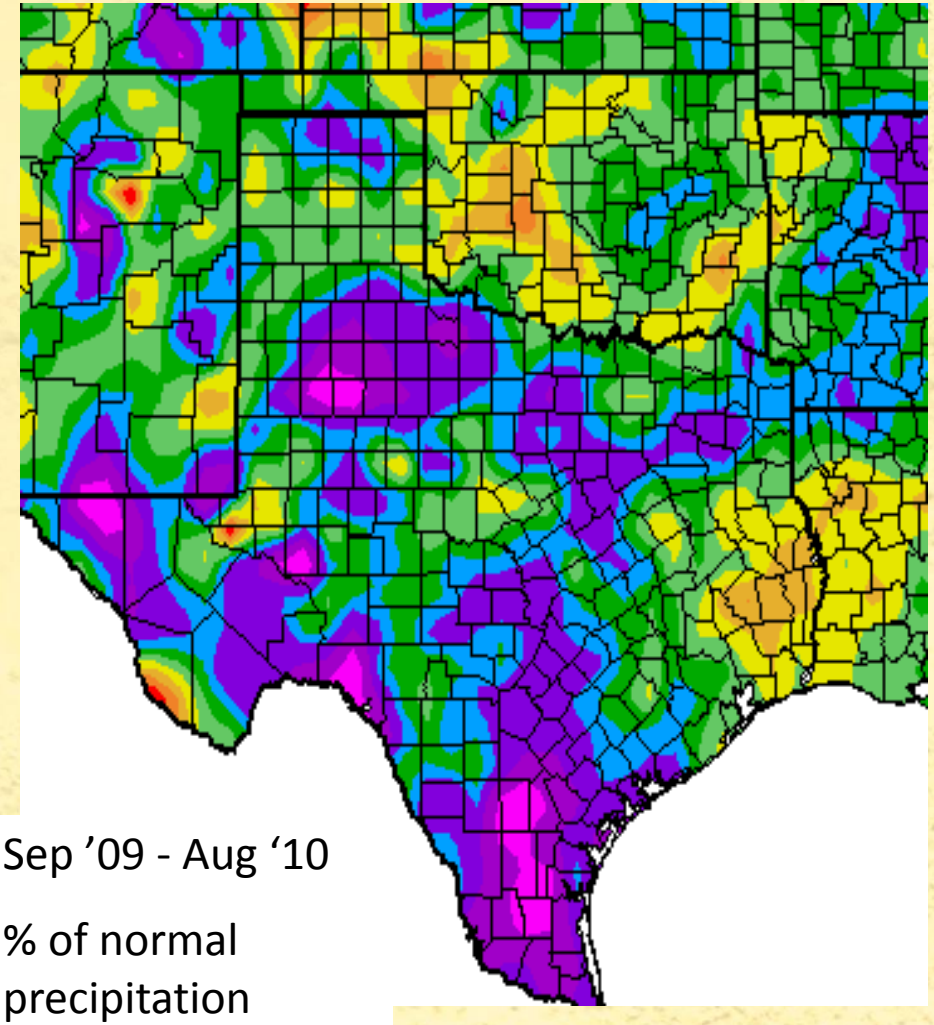


Texas Burning 2011*

*Courtesy of Greg Carbin, WCM, SPC

A Study in Contrasts: 2010 vs. 2011

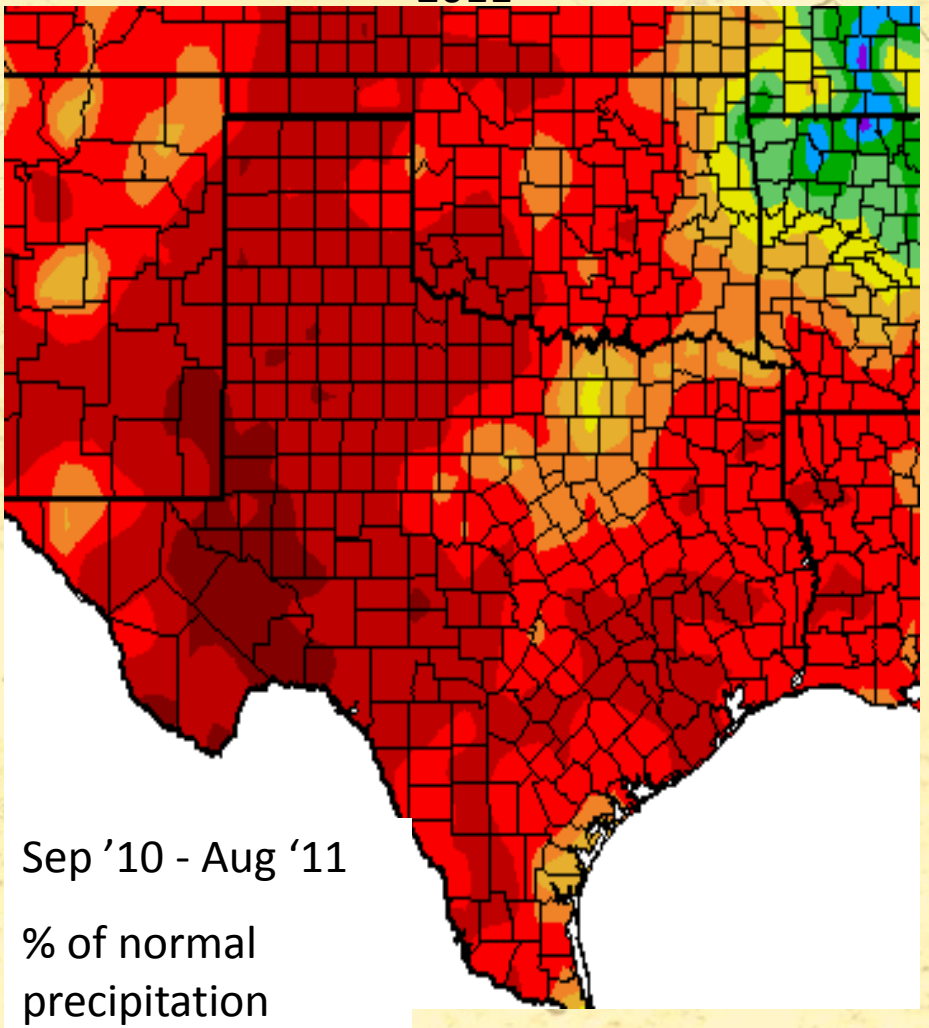
2010



Sep ’09 - Aug ‘10

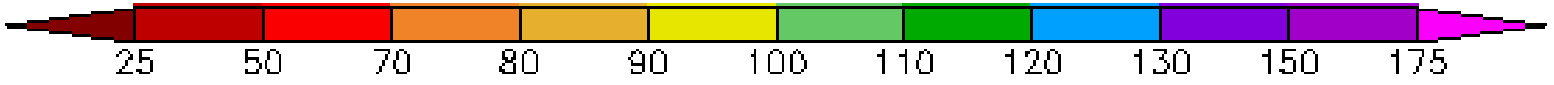
% of normal precipitation

2011



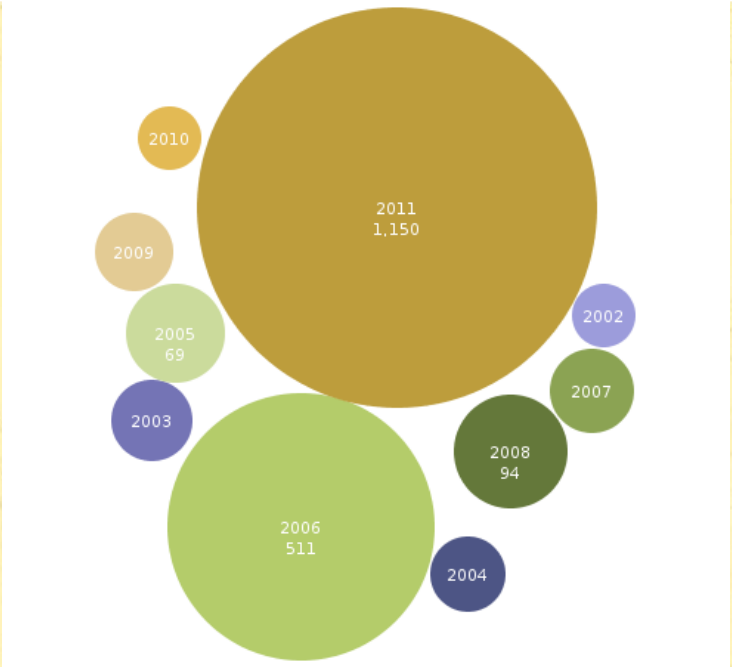
Sep ’10 - Aug ‘11

% of normal precipitation

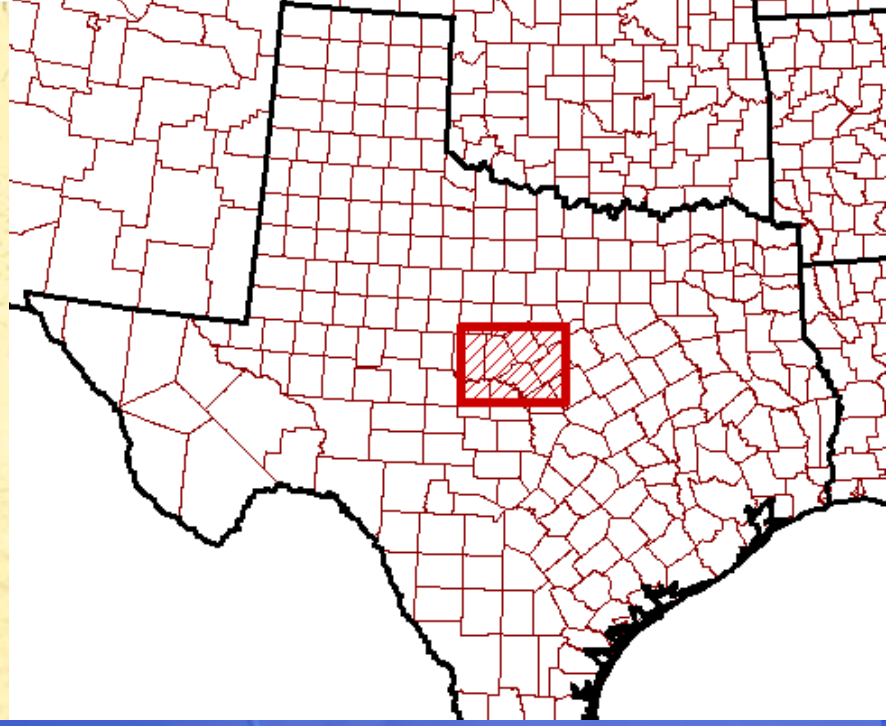


Generated 9/5/2011 at HPRCC using provisional data.

Regional Climate Centers



Average acres per fire in recent years

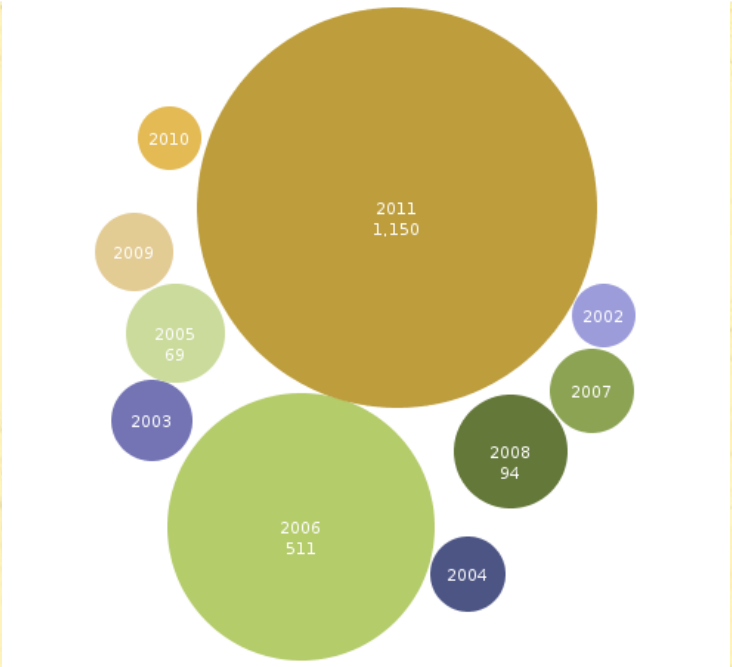


Texas Fires Account for 50% of U.S. Total
6 of 10 Largest Fires in TX History in ‘11

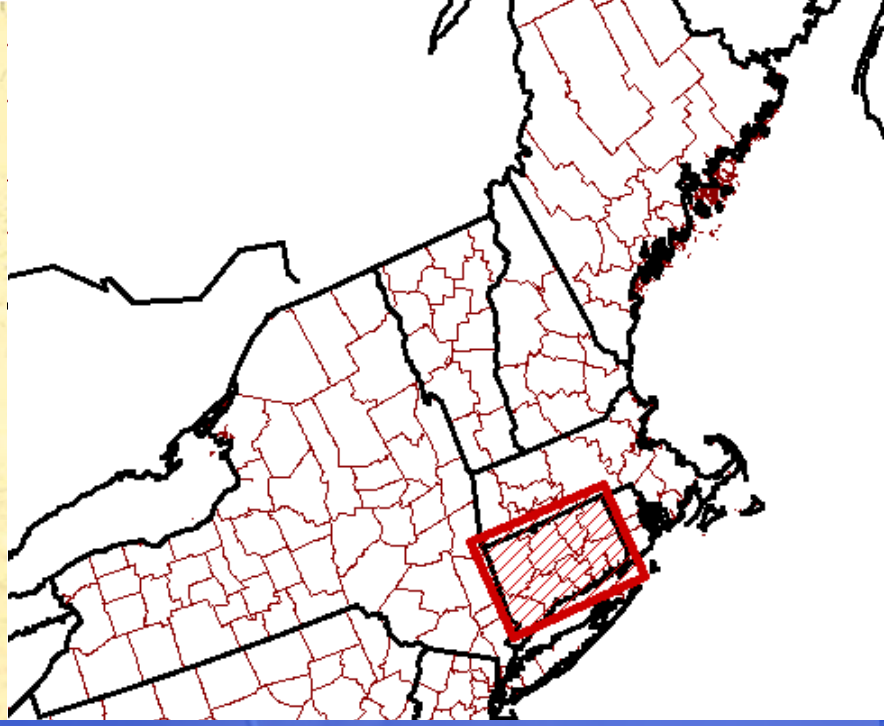
Wayne Johnson

Texas Fores

Est. Loss $5B



Average acres per fire in recent years



20,000 Fires Consume Area Size of CT
Texas Fires Account for 50% of U.S. Total
6 of 10 Largest Fires in TX History in ‘11

Wayne Johnson

Texas Fores

Est. Loss $5B

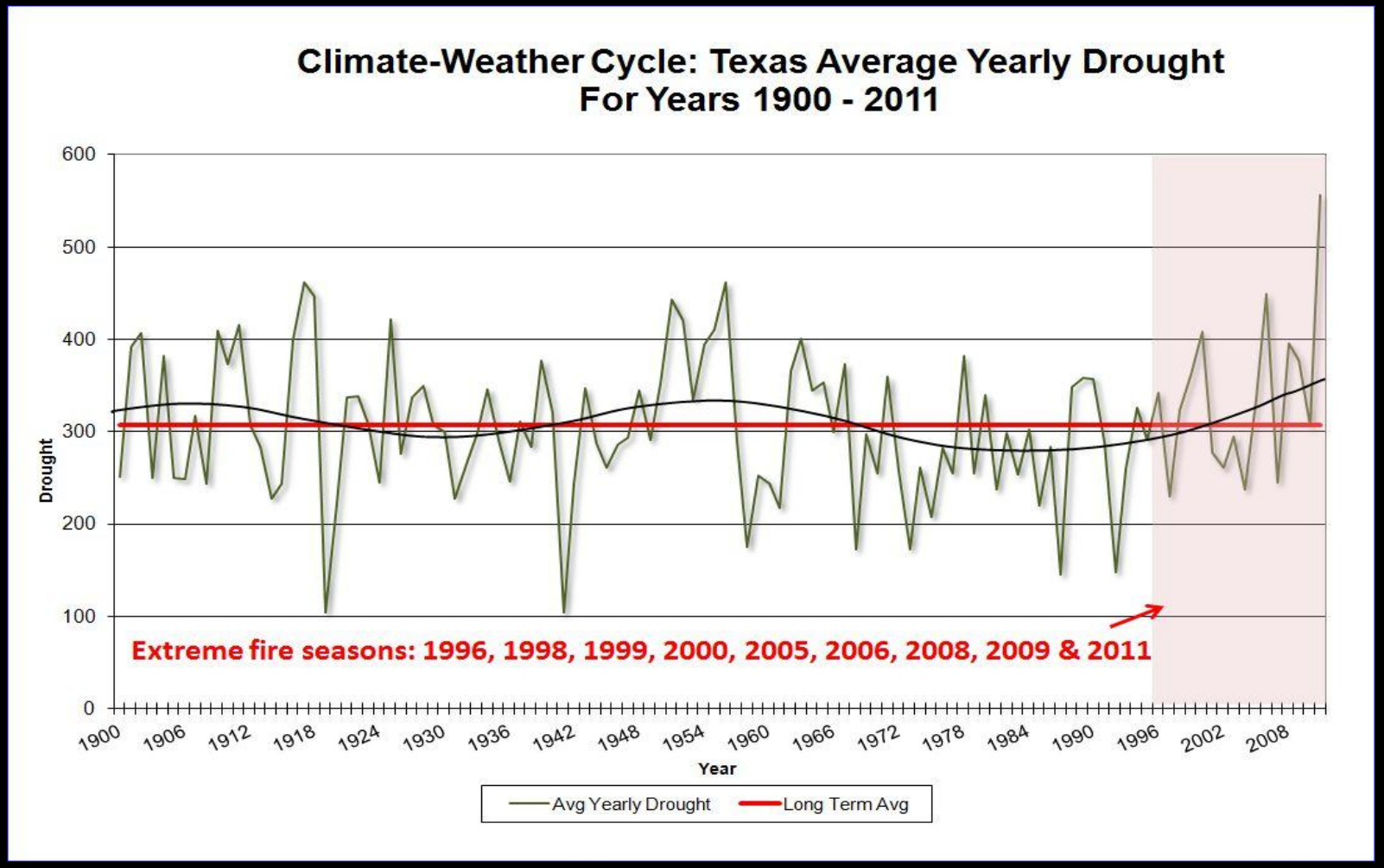

Questions?
Visit us at:
www.spc.noaa.gov/fire
Or e-mail me at
Phillip.bothwell@noaa.gov
National Weather Center
Copyright 2006 Robert Fritchie

Texas Wildfires

Brad Smith
Wildland Fire Analyst
Texas Forest Service

TEXAS FOREST SERVICE
The Texas A&M University System

Statewide KBDI Average Since 1900



TEXAS FOREST SERVICE
The Texas A&M University System

2011 Texas Wildfire Impacts

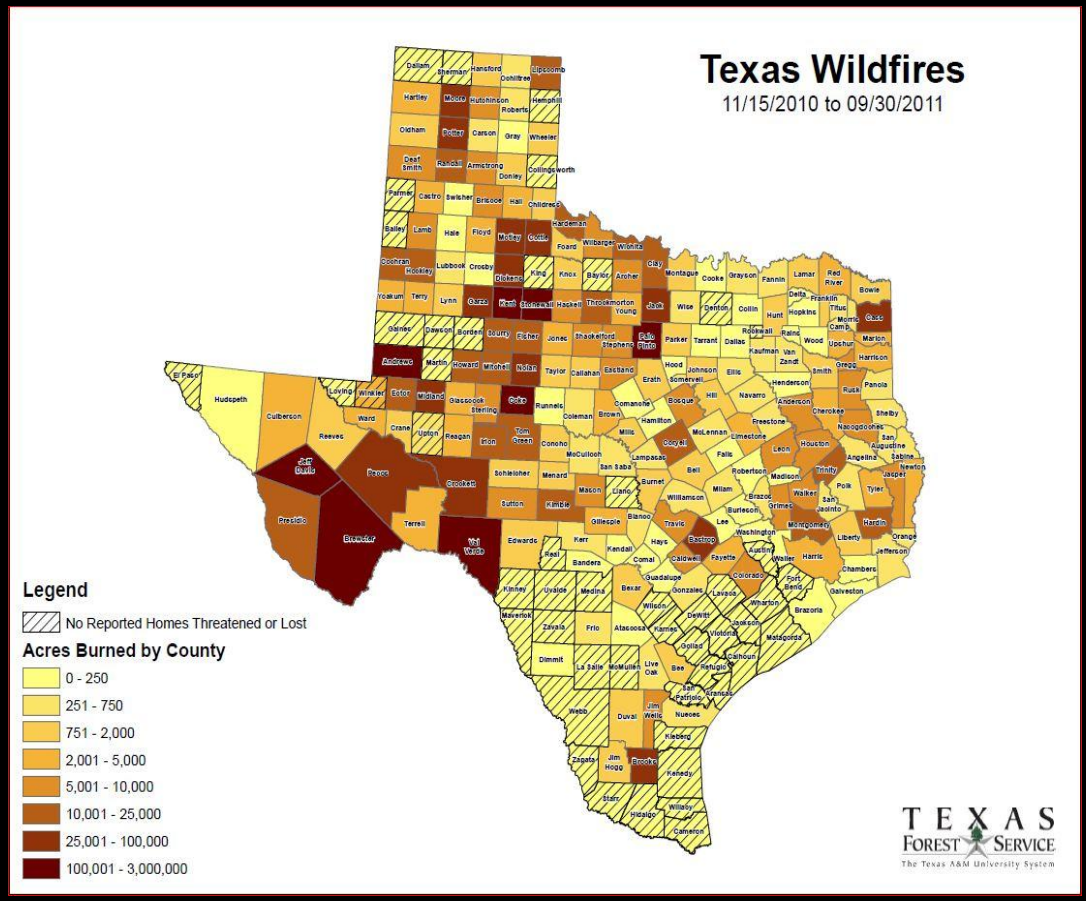
3300 fires burned 3 million acres and destroyed 2246 homes in 2011

April 6th-April 30th

318 fires	10%
1.5 MM Acres	53%
264 Homes	10%

August 30-Sept. 5th

160 Fires	5%
166M Acres	6%
1982 Homes	76%

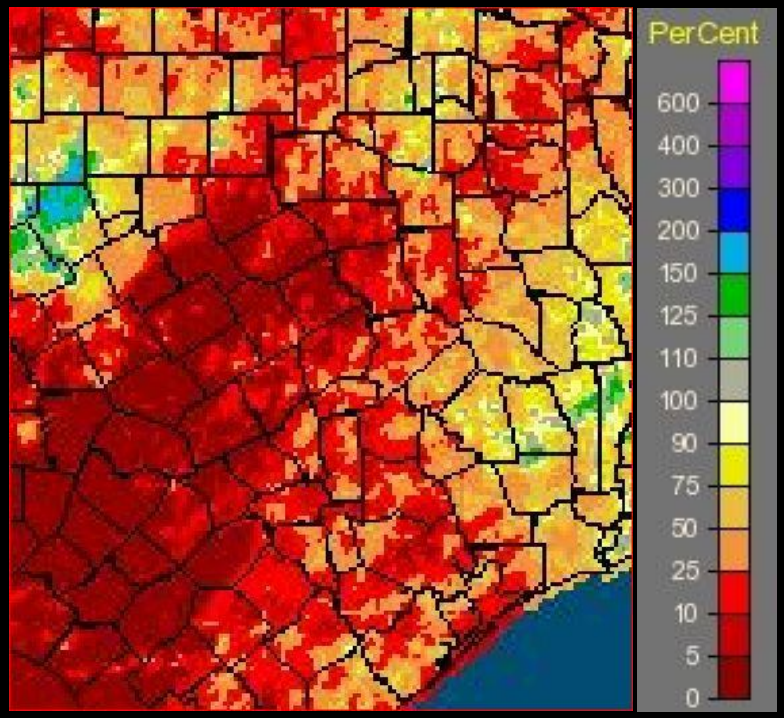


TEXAS FOREST SERVICE
The Texas A&M University System

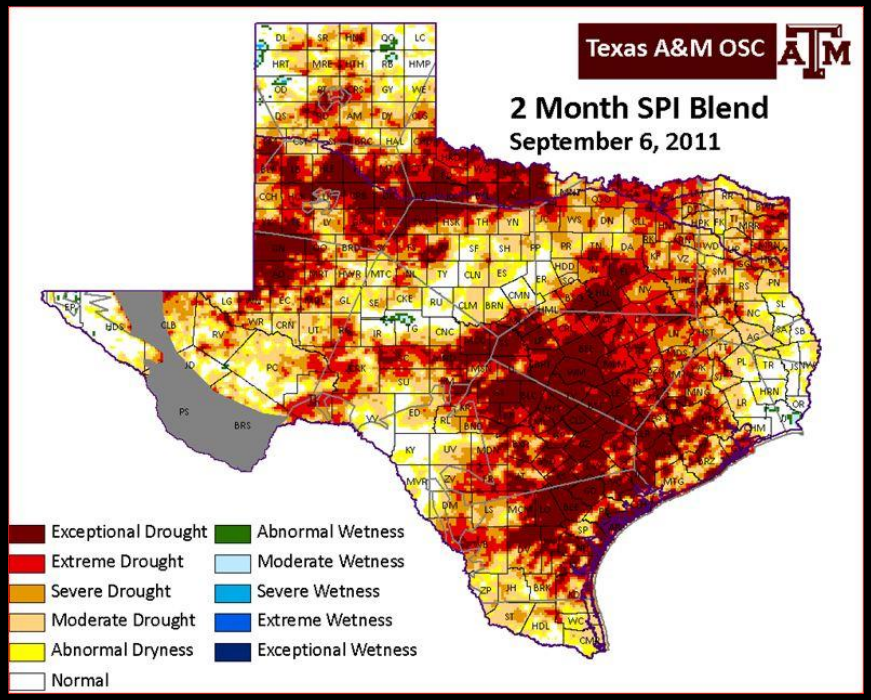
30 and 60-Day Dryness

September 6th 2011

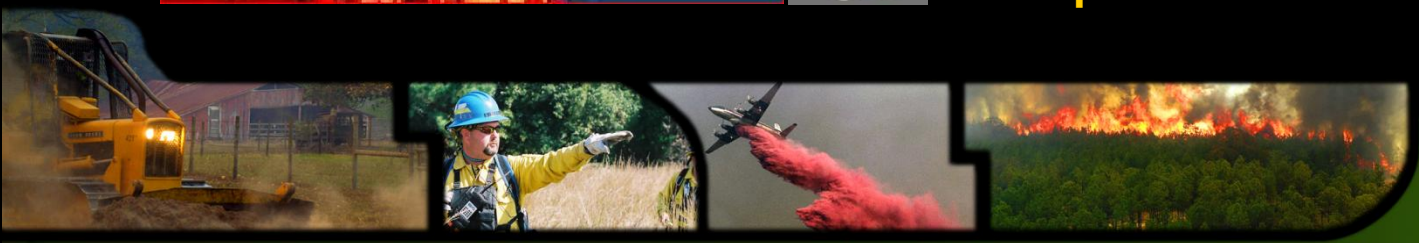
30-Day Percent of Normal Rainfall



60-Day Standard Precipitation Index



http://atmo.tamu.edu/osc/drought/

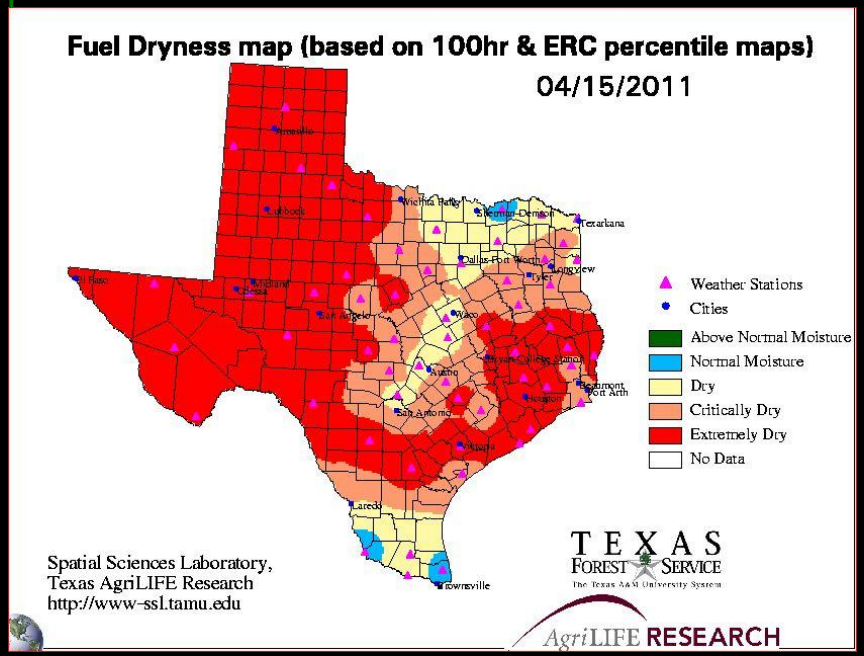


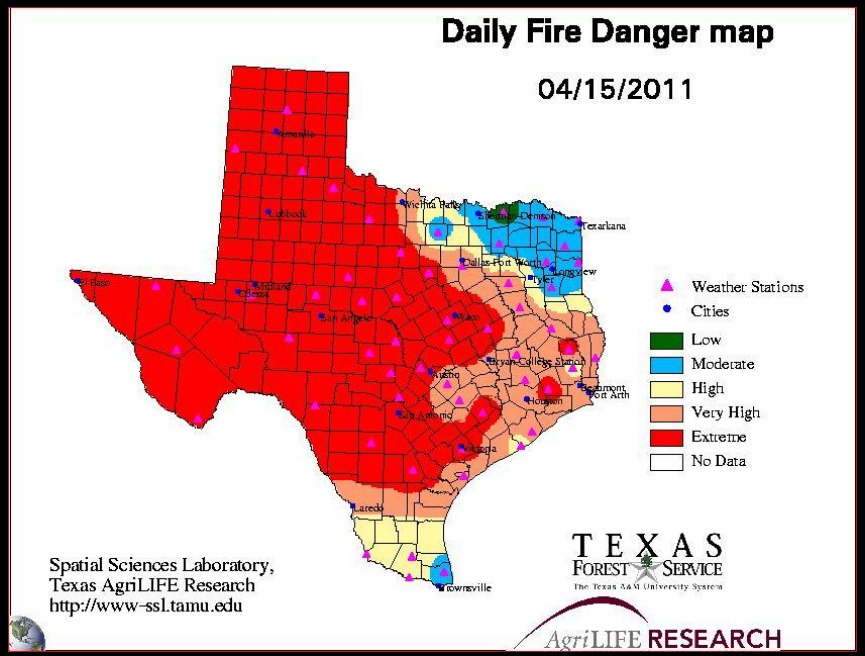
TEXAS FOREST SERVICE
The Texas A&M University System

Fire Potential on April 15th 2011

Fuel Dryness is a cumulative measure of fuel conditions. Fuel Dryness has a 7 day memory

Fire Danger reflects a daily measure of the strength of the weather. Fire Danger resets each day

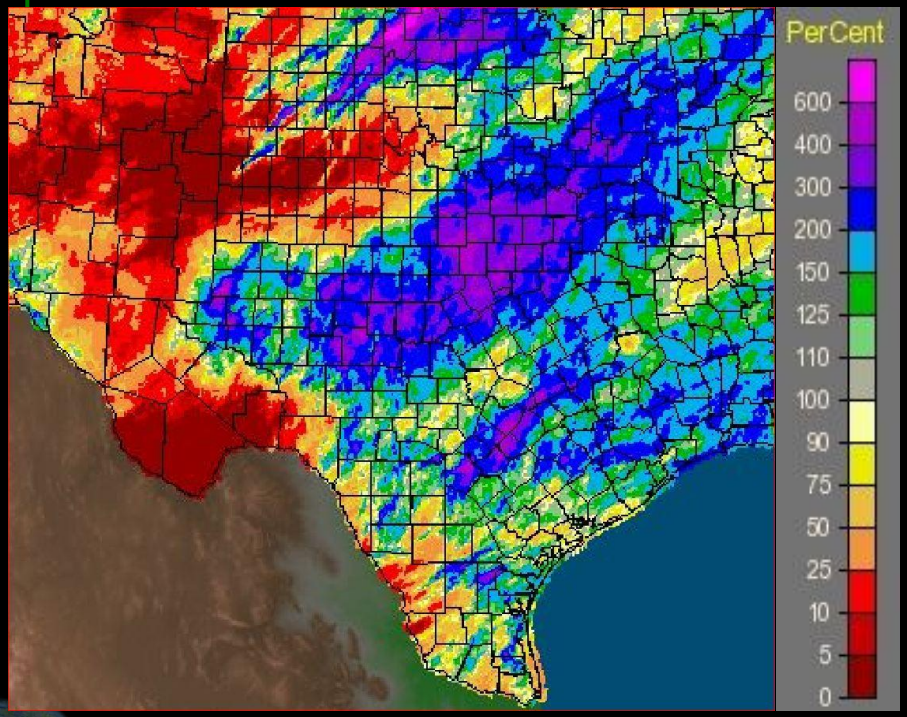




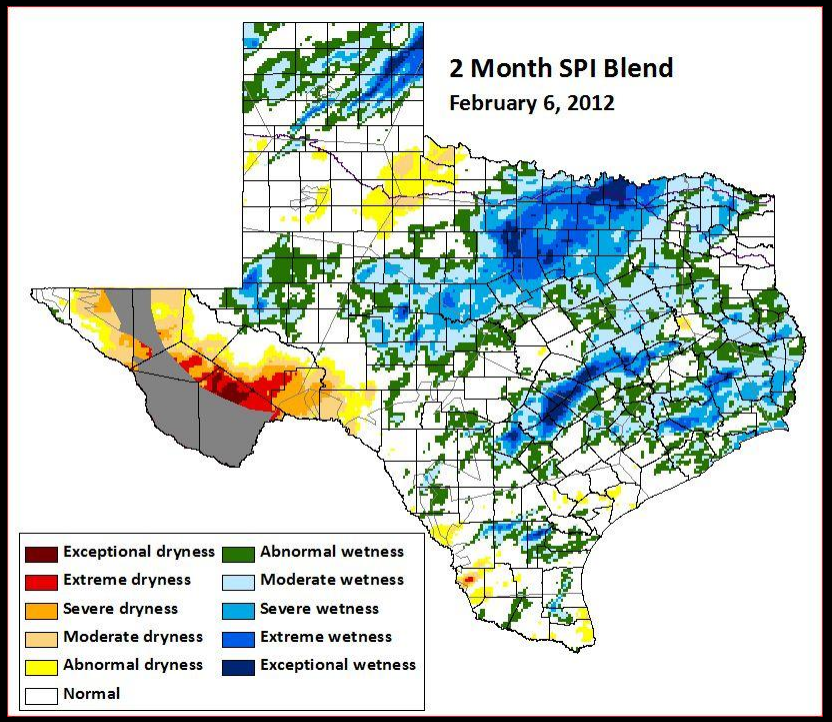
TEXAS FOREST SERVICE
The Texas A&M University System

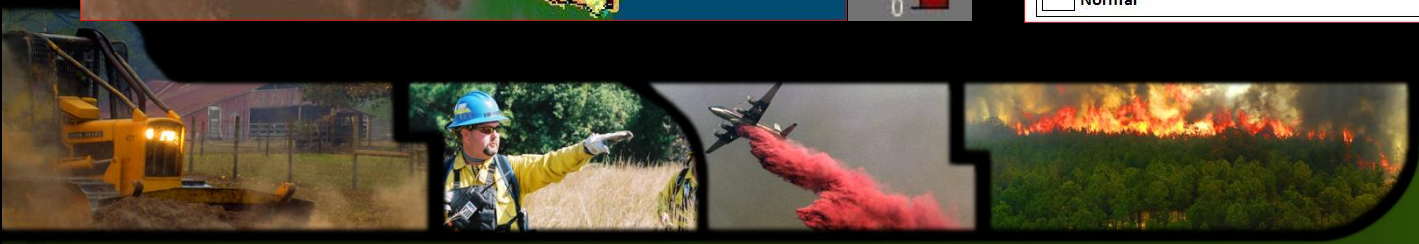
Current 30 and 60-Day Dryness

Current 30-Day Percent of Normal Rainfall



Current 60-Day Standard Precipitation Index (SPI)



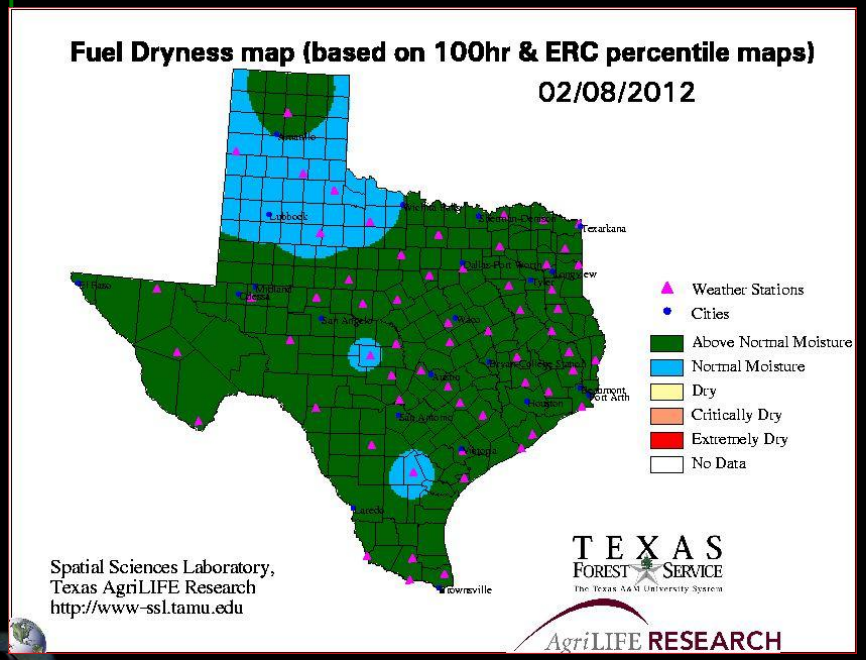


TEXAS FOREST SERVICE
The Texas A&M University System

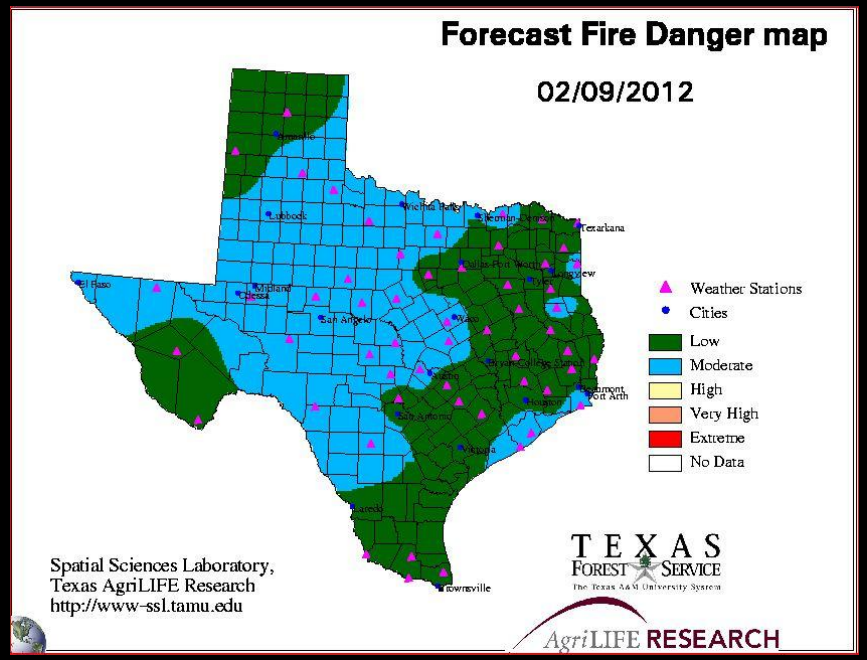
Current Fire Potential

http://ticc.tamu.edu/PredictiveServices/Preparedness.htm

Yesterday's Observed Fuel Dryness



Today's Forecast Fire Danger

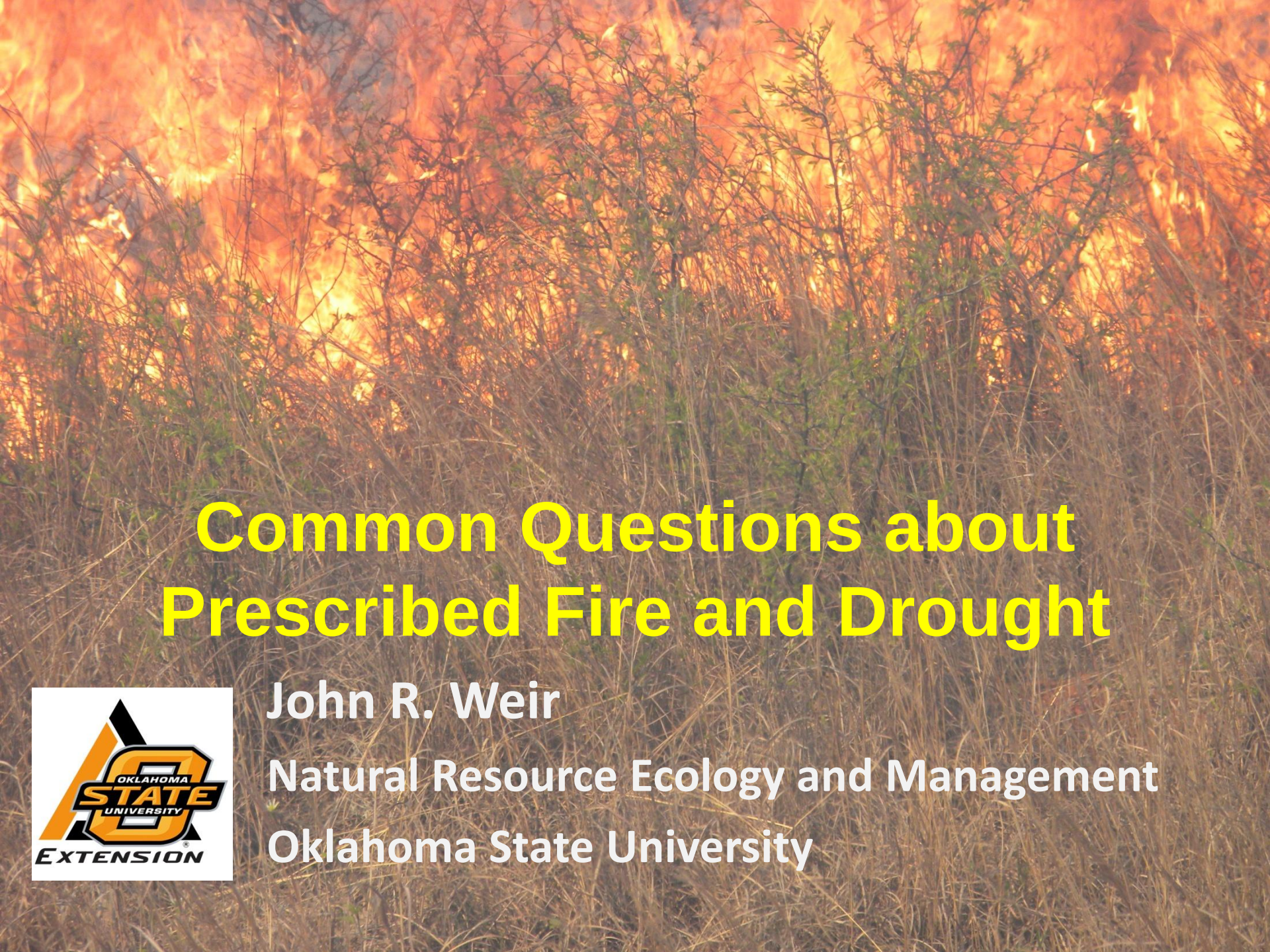


TEXAS FOREST SERVICE
The Texas A&M University System

2012 Wild Cards

Widespread Juniper Mortality

Below Normal Fine Fuel (Grass) Loading



Common Questions about Prescribed Fire and Drought

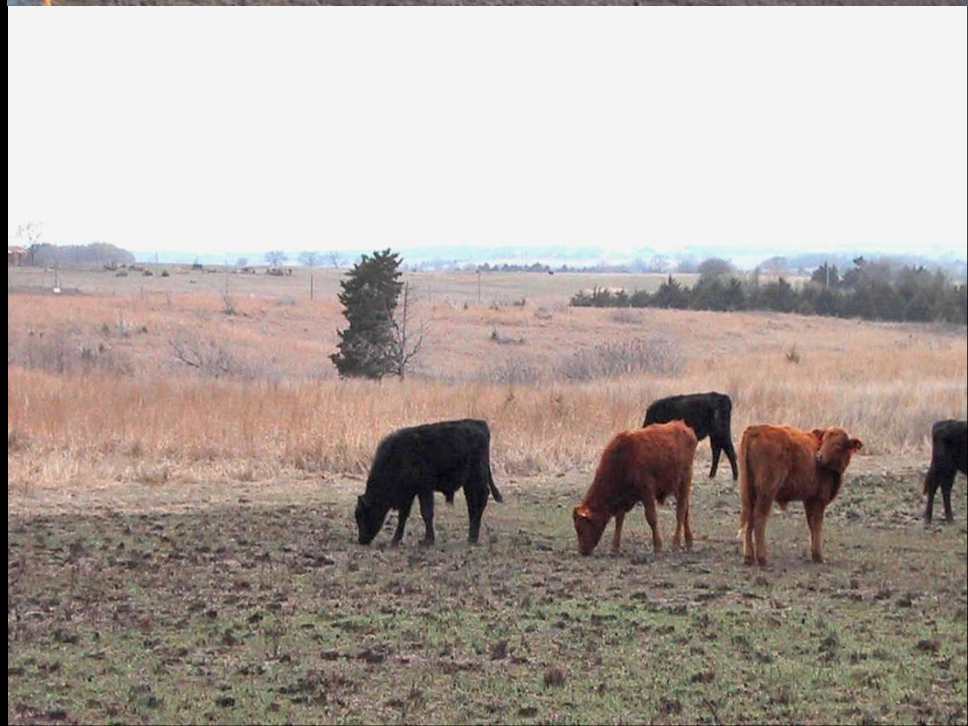
John R. Weir

Natural Resource Ecology and Management

Oklahoma State University

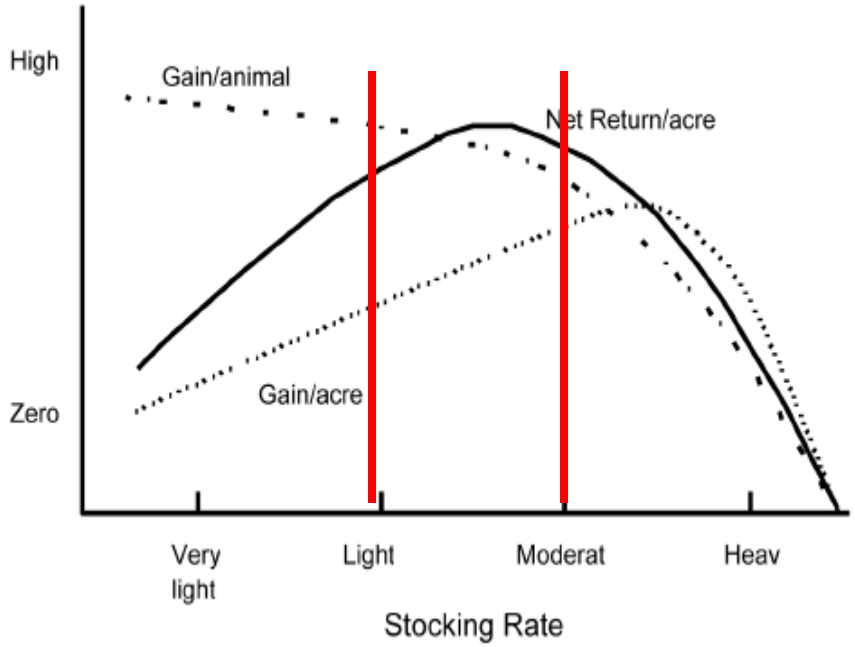
Should I Burn?

- Goals and objectives
- What are you burning
- Burning entire property or pasture
- Consider patch burning
- See OSU Ext. Pub. E-998 **Patch Burning: Integrating Fire and Grazing to Promote Heterogeneity**



What if I don't have enough fuel to burn?

- If fuel is an issue, don't burn
- Why do you not have fuel
- Adjust stocking rate
- Should always be managing for a drought
- See OSU Ext. Pub. NREM-2886 **Stocking Rate Determination on Native Rangeland**



Will fire kill native plants if I burn during the drought?

- Native Plants are adapted
- Historically fire occurred before, during and after droughts
- Time since fire and rainfall are the most important factors
- See OSU Ext. Pub. NREM-2877 **Fire Effects in Native Plant Communities**

Should I wait to see if it rains before burning?

- Knowing if it is going to rain would be nice…anytime
- Wait to see if spring rains occur
- Burn in May, June or July
- See OSU Ext. Pub. NREM-2877 **Fire Effects in Native Plant Communities**

Is there more risk of the fire escaping burning in a drought?

- There are still good burn days
- Larger fuel types become dryer
- Cedar leaf moisture lower, more volatile
- See OSU Ext. Pub. NREM-2878 **Fire Prescriptions for Maintenance and Restoration of Native Plant Communities**

February 07, 2012 A full-day OK-FIRE training workshop will be held

OK-FIRE

Forecast based on 2012-02-08 06Z NAM; *NEXT* forecast update expected 10 am CST

http://okfire.mesonet.org/

About Us | Contacts | Product Information | Learning Tools | News

WEATHER | FIRE | SMOKE | SATELLITE | RADAR | AIR QUALITY | BURN SITE | LINKS

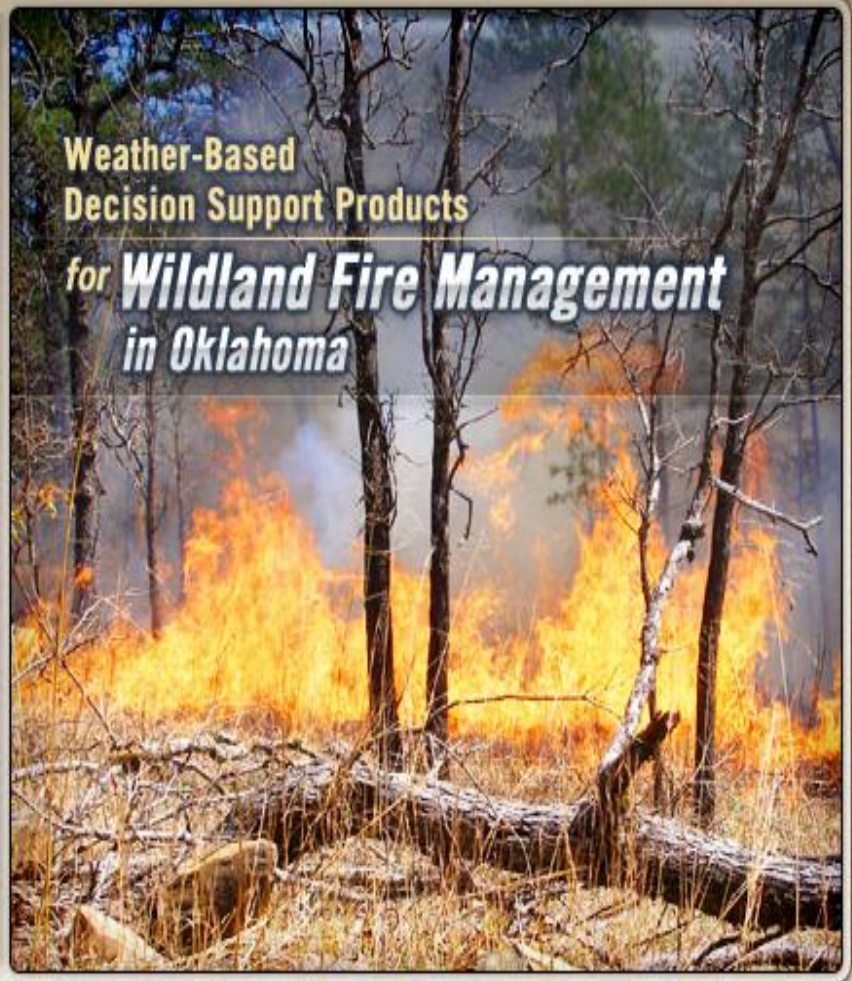
Marena Wed 2/08/12

Weather	8:30 am CST
Temperature:	31°F
Wind Chill:	26°F
Relative Humidity:	96%
10-m Wind:	NNW 6 mph
24-h Rainfall:	0.00"
Dispersion:	Moderately Poor

Fire Danger	8:00 am CST
Current Fire Danger:	LOW
Burning Index:	9
Spread Component:	2
Ignition Component:	0%
NFDRS Fuel Model:	R
1-hr Fuel Moisture:	21%
10-hr Fuel Moisture:	15%
KBDI:	40
Relative Greenness:	23%

Sunrise: 7:25 am Sunset: 6:02 pm

CHOOSE A STATION



WeatherScope 1.8 required

The interactive features of this web site require the free WeatherScope software.

Click Here to download WeatherScope.

DOWNLOAD NOW

For more information

nrem.okstate.edu/Extension

NREM Extension

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- Home
- Youth Programs
- Adult Programs
- Extension Publications
- NREM Newsletter
- Questions & Comments
- Interesting Links
- NREM Home

Oklahoma Cooperative Extension Service fulfills Oklahoma State University's land-grant mission by providing people with information necessary to improve their quality of life. Specifically, NREM Extension enables stakeholders to understand natural resources in order to effectively manage resources on a sustainable basis, and to increase productivity and efficiency through landowner and manufacturer education.

Within the NREM Department, Extension offers expertise in the fields of aquaculture, forestry, range and wildlife science. NREM Extension personnel develop and maintain mutually beneficial collaborations with other universities, government agencies, non-government organizations and private entities to enhance educational opportunities and programs. Additionally, NREM Extension provides natural resource educational opportunities to youth through various programs designed to promote good stewardship of our natural resources and build the leaders of tomorrow.

NEWS & EVENTS

- Recurve Archery Contest
  Payne County Expo
  April 14, 2012
- Compound Archery Contest
  Payne County Expo
  April 21, 2012
- State Forestry Judging Contest
  Robbers Cave
  April 24, 2012
- State WHEP Contest
  Wichita Wildlife Refuge
  June 2, 2012
- National WHEP Contest
  July 22-26, 2012
  Texas

Having Problems With Wildlife Damage?

Ready, Set, Go!
& Firewise

Karen Stafford| Texas Forest Service | Staff Forester II

TEXAS FOREST SERVICE
The Texas A&M University System

READY, SET, GO!

FIREWISE COMMUNITIES

Firewise Communities

- A national program that acknowledges and encourages homeowners and communities who are proactive in addressing their wildfires issues in their neighborhoods.
- www.firewise.org
- Community Driven!

FIREWISE COMMUNITIES

Firewise Requirements

- Contact Firewise Representative
- Conduct a hazard risk assessment
- Formation of a “Firewise Board”
- Create a Wildfire Protection Plan
- Complete at least one major project
- Observe a Firewise Day
- Invest $2 per capita in Firewise projects
- Submit report to Firewise USA

Home Construction and Maintenance

Ignition Resistant construction materials and *defensible space* are what gives a home the best chance to survive a wildfire.

Get Ready With 30 Feet of Defensible Space

- It protects the home from igniting due to direct flame contact or radiant heat by separating the fuels/vegetation.
- It also gives firefighters the space they need to protect a home.

How to Create Defensible Space

- Remove any continuous fuels by thinning the vegetation.
- Remove any dead vegetation.
- Remove or prune vegetation next to windows.
- Choose plants that have a low flammability (high moisture content).

Defensible Space

- Keep the 30 foot space lean, clean, and green.
- Break up the horizontal and vertical continuity of vegetation.
- Select fire resistant plants for landscaping.

Roof and Eaves

Embers can gather under open eaves and ignite exposed wood. Use ignition-resistant materials to box in eaves.

Keep pine/leaf litter cleared off the roof and gutters.

The roof and soffits are the most vulnerable surfaces. Use fire-resistant materials for the roof like metal, tile, or composition shingles.

Walls & Windows

- Use non-combustible siding material such as stucco or masonry.
- Smaller, double-pane and tempered glass windows with a metal frame will withstand heat better.
- Combustible materials or landscape plants near windows can be ignited and generate enough heat to break windows.

Vents

- Use 1/8” screening behind all vents.

Wooden Attachments

- Use non-combustible fencing for sections near the structure.
- Screen-in underneath the deck to keep leaf and pine litter from accumulating.

Window AC Units

And other weak links

Get Set – Act Immediately

1. Dress in appropriate clothing (cotton, leather boots, bandanas, gloves)
2. Remove flammable window shades and curtains
3. Shut off air conditioning
4. Leave your lights on
5. Back your car into your drive way
6. Monitor the conditions

READY SET GO!

Go! – Leave Early

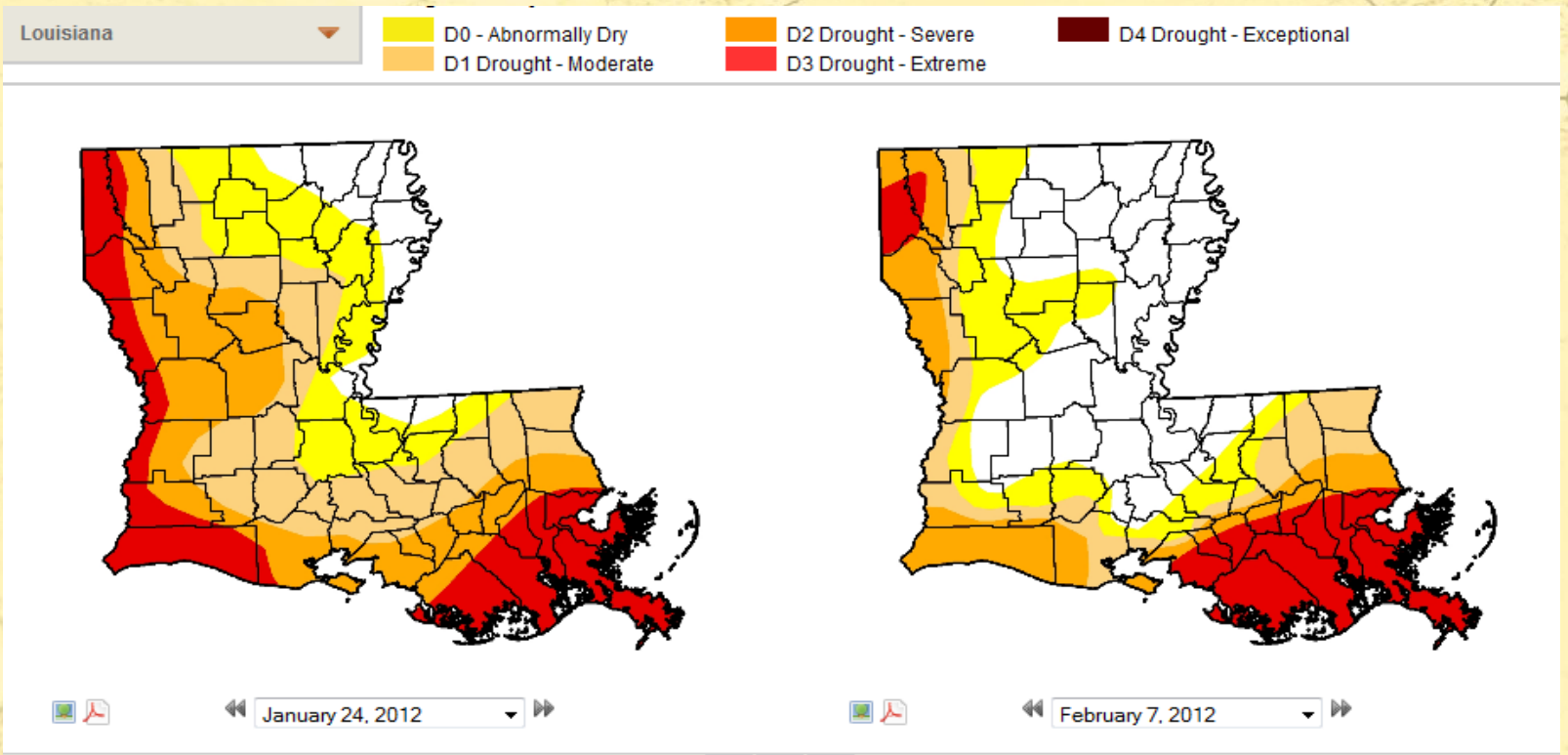
- Evacuate Early. Don’t wait to be told.
- Take your emergency supply kit and pets.

Wildfire awareness is as simple as Firewise & Ready, Set, Go!

- Ready - Prepare your home now before a wildfire threatens. Firefighters need your help protecting your home.
- Set – Have an evacuation plan and a “to go kit”.
- Go – If firefighters ask you to leave, please go knowing your home is prepared.

www.wildlandfireRSG.org

www.firewise.org



Week	Nothing	D0-D4	D1-D4	D2-D4	D3-D4	D4
January 24, 2012	8.95	91.05	72.65	46.79	21.73	0.00
February 7, 2012	38.82	61.18	43.73	30.90	16.09	0.00

- Over past 2 weeks, LA went from 73% to 44% of State in Drought
- Heavy rains across Central LA; 3 sites over 14 inches in last 2 weeks; Clim Div 5 = 8.8”
- The culprit: several instances of Cyclogenesis in western Gulf – Un-La Nina-like
- Rains keep missing extreme SE LA – Climate Div 9 over last 17 days averaged 2.1” (DFN -1”)

Resources

- U.S. Drought Portal
  - http://www.drought.gov
- Southern Plains Information & Past Webinars
  - http://www.drought.gov/portal/server.pt/community/southern_plains
- Drought Impact Reporter
  - http://droughtreporter.unl.edu/
- State Climatologists
  - http://www.stateclimate.org/
- National Drought Mitigation Center
  - http://drought.unl.edu/
- Southern Climate Impacts Planning Program (SCIPP)
  - http://www.southernclimate.org/
  - Youtube: http://www.youtube.com/user/SCIPP01
- Climate Assessment for the Southwest (CLIMAS)
  - http://www.climas.arizona.edu/

We are now on facebook!
Southern Climate Impacts Planning Program

Is drought properly classified in your region? If not, let us know!

- Drought Impact Reporter
- Contact your State Climatologist
- E-mail the DM Authors: droughtmonitor@unl.edu